

2002 HOV ANNUAL REPORT



High Occupancy Vehicles

California Department of Transportation

District 7

Los Angeles and Ventura County

“ Building an effective Traffic Management System to move more people, increase mobility, and provide trip reliability in the Southern California region”.



- Existing
- Under Construction
- Design Stage
- Planning Stage

June 2003

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ACKNOWLEDGEMENTS

The Annual High Occupancy Vehicle (HOV) Operation Report is prepared by the Office of Freeway Operations, HOV Branch in District 7. The information in this report encompasses all HOV lanes in Los Angeles and Ventura Counties.

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INTRODUCTION

Caltrans, District 7 (Los Angeles/Ventura County) is home to the nation's most extensive High Occupancy Vehicle lane program, which will be adding carpool lanes to virtually every freeway in the Los Angeles area.

The HOV program is the backbone of a multi-modal transportation system. In providing an HOV system, Caltrans is providing the network necessary for the higher level mass transit systems in the future. The HOV system is also the least expensive method or alternative to accommodate economic growth and development.

The 4.3 billion HOV program is designed to quickly increase mobility in the region. HOV lanes are seen as the next logical step in improving freeway efficiency to accommodate future increases in population and traffic.

The central concept of the HOV program is to move more people instead of cars. We cannot build our way out of future growth and congestion, by simply adding more and more lanes. When HOV lanes were introduced in Los Angeles County, the HOV system was designed to:

- a. Increase the person-movement capacity of the freeway
- b. Be cost-effective, by reducing commute costs
- c. Provide rideshare incentives, such as saving time and trip reliability.

The results of these goals improve air quality, conserve energy, increase mobility and efficiency of all trips, and reduce congestion. Even if you are not able to rideshare, adding HOV lanes will help your solo commute, by reducing congestion on all freeway lanes.

The Interstate 10 HOV lane, also known as the El Monte Busway, was a pioneering experiment in determining the value of the HOV lanes. The easterly section opened in January of 1973, and the westerly section joined the system in May of 1974. Originally designed for buses only, carpools with three or more people were allowed a few years later. The Route 10 El Monte Busway lane now carries as many people as three regular traffic lanes during peak hours.

The current District 7 HOV program has an important distinction from the "Diamond Lane" experiment of the 1970s: no traffic lanes are being taken away. Rather, the new HOV lanes are being added to the existing freeways, mostly through re-striping and using part of the freeway median, or outside widening.

When complete, Los Angeles County (District 7) will have more than 300 centerline miles (or over 600 lane miles) of HOV facilities in place. The HOV projects are being designed and constructed using local Proposition C funds, and federal and state funds. The funds are being programmed and administered by the Los Angeles County Metropolitan Transportation Authority.

INTRODUCTION

The minimum number of persons required in a vehicle is two to use HOV lanes, with the exception of the Route 10 El Monte Busway which requires a minimum of three persons during peak hours, and Route 91 Toll Road in Orange County, which requires a minimum of three persons at all times. Motorcycles and certain clean air vehicles with a Department of Motor Vehicles' decal, even those carrying just one person, are allowed to use the HOV lanes, by federal law.

All HOV facilities in Southern California are operated on a 24 hour basis except on State Route 14. Beginning January 1, 2001, an 18 month part-time demonstration project was conducted which allowed solo drivers to use the HOV lanes during non-peak hours. FHWA has agreed with the recommendation of Caltrans to continue with the part-time operation of HOV lanes on SR-14 freeway until such time as needed to convert to full-time.

It has been concluded that a significant growth in carpools occurred only on freeways that added HOV lanes, with the number of carpools remaining relatively constant or decreasing for those freeways without HOV lanes. Getting a solo driver out of his car is the biggest challenge, but Caltrans believes that the formation of a simple 2+ carpool is the first step toward higher levels of mass transit, which is the future goal of transportation. The reduction of drive alone is a complicated subject since new drivers join the freeway everyday and route diversion may account for some of the new carpools, instead of carpool growth. However, freeways in Los Angeles which have added HOV lanes, have shown a significant increase in the number of 2+ vehicles, with some HOV lanes carrying as much as 1600 vehicles in the peak hour. On average, for the year 2002, HOV lane users saved at least 36 seconds per mile, compared to mixed flow traffic during the peak hour.

GENERAL INFORMATION

- ◆ **FREEWAYS AND HIGHWAYS IN SOUTHERN CALIFORNIA**
- ◆ **HOV RAMP METERING AND HOV BYPASS LANES**
- ◆ **FREQUENTLY ASKED QUESTIONS ABOUT PARK AND RIDE**
- ◆ **HOV VIOLATION FINES**

FREEWAYS & HIGHWAYS IN SOUTHERN CALIFORNIA

<i>ROUTE</i>		<i>ROUTE</i>	
LAVEN 01	PACIFIC COAST HWY	LA 90	IMPERIAL HWY MARINA FWY
LA 02	GLENDALE FWY SANTA MONICA BLVD	LA 91	ARTESIA FWY RIVERSIDE FWY GARDENA FWY
LA 05	GOLDEN STATE FWY SANTA ANA FWY	LAVEN 101	LA - HOLLYWOOD FWY VEN - VENTURA FWY
LA 10	SANTA MONICA FWY SAN BERNARDINO FWY	LA 103	TERMINAL ISLAND FWY
LA 14	ANTELOPE VALLEY FWY	LA 105	CENTURY FWY
LA 18	PALMDALE RD	LA 107	HAWTHORNE AVE
LA 19	ROSEMEAD BLVD	LA 110	HARBOR FWY PASADENA FWY
LA 22	GARDEN GROVE FWY	LAVEN 118	RONALD REAGAN FWY
LAVEN 23	LA - WESTLAKE BLVD VEN - MOORPARK FWY	LAVEN 126	VEN - SANTA PAULA FWY/TELEGRAPH RD LA - MAGIC MOUNTAIN PKWY LA - KOREAN WAR VETERANS MEM HWY
LA 27	TOPANGA CANYON BLVD	LA 133	LAGUNA CANYON RD
VEN 33	OJAI FWY / MARICOPA HWY	LA 134	VENTURA FWY
VEN 34	SOMIS-LEWIS RD	LA 138	PEARBLOSSOM HWY
LA 39	ORA - BEACH BLVD L.A. - AZUSA AVE	LA 142	CARBON CANYON RD
LA 42	MANCHESTER BLVD	VEN 150	OJAI SANTA PAULA RD CASSITAS PASS RD
LA 47	VINCENT THOMAS BRIDGE	LA 164	ROSEMEAD BLVD
LA 49	LANCASTER RD AVENUE D	LA 170	HOLLYWOOD FWY
LA 55	COSTA MESA FWY NEWPORT BLVD	LA 187	VENICE BLVD
LA 57	ORANGE FWY	LA 210	FOOTHILL FWY
LA 60	POMONA FWY	LA 213	WESTERN AVE
LA 66	FOOTHILL BLVD	VEN 232	VINEYARD AVE
LA 71	CORONA EXPRESSWAY	LA 405	SAN DIEGO FWY
LA 72	WHITTIER BLVD	LA 605	SAN GABRIEL RIVER FWY
LA 73	73 FWY	LA 710	LONG BEACH FWY
LA 74	ORTEGA HWY		

HOV RAMP METERING AND HOV BYPASS LANES

There are 859 on-ramps that are metered in Los Angeles and Ventura Counties; of which, 349 have separate HOV bypass lanes, where the HOVs do not have to stop at the ramp meter signal. Ramp metering is one of the traffic management tools to regulate the flow of traffic entering the freeways during the peak traffic hours. Ramp metering will:

- a. Smooth the overall flow of freeway traffic
- b. Accommodate more vehicles per hour on the freeway
- c. Decrease commuting travel times
- d. Increase safety on the freeway

Ramp metering reduces traffic congestion on the freeway. This increases the capacity of the mixed flow lane and enables traffic to flow at greater speeds. The number of traffic accidents are reduced as well. Freeway congestion is most often caused by a bottleneck, where the freeway demand exceeds the freeway capacity. This condition usually occurs during the weekday peak hours, but some freeways experience congestion during the mid-day and some on weekends. When the demand exceeds the capacity, congestion creates queues of stop-and-go traffic, and ramp metering limits the amount of traffic entering the freeway so that the demand at the bottleneck does not exceed the capacity. A free-flowing traffic lane can carry 33% more cars than a congested lane. It is in the interest of all the public to keep the freeways moving freely.

On weekdays, the meters operate 3 to 4 hours during the peak traffic periods. Some ramps are also metered during the mid-day hours, and some are even metered on weekends. The rate at which cars are allowed onto the freeway is determined by the ramp volume, as well as the volume on the freeway. The mainline responsive controllers react to the volumes on the freeway, such that if the volumes decrease significantly, then the meter will adjust and allow more cars onto the freeway. If the freeway volumes are very light, the meter may go to continuous green.

Projects within freeway segments identified in the Ramp Meter Development Plan should include provisions for ramp metering. However, there are ramp locations that are not metered, due to the heavy volume of traffic and/or insufficient storage area for the metered vehicles. The average cost for a complete installation of a ramp meter is \$50,000. This cost as a percentage of the freeway construction varies depending on the type of freeway construction.

MOST FREQUENTLY ASKED QUESTIONS ABOUT PARK & RIDE

Q. Where can I get park and ride information?

- A. 1. Call 1-800-COMMUTE, or 1-800-266-6883.
2. Refer to Thomas Guide, "Los Angeles points of interest".
3. For the most comprehensive information about park and ride lots, go to SCAG site: <http://mapsvr.scag.ca.gov/parkride/>, linked to district 7 commuters information site.

Q. How many park and ride lots in District 7?

- A. 74 (52 state owned and 22 private/public partnership) lots in Los Angeles and Ventura counties.

Q. Who maintains state owned park and ride lots?

- A. Caltrans maintenance.

Q. Does Caltrans provide security for the park and ride lots?

- A. No.

Q. Who is responsible for surveillance of the state owned park and ride lots?

- A. California Highway Patrol.

Q. What is the purpose of the goodwill donation centers at some of the park and ride lots?

- A. To provide presence to the lot, and also to help with general maintenance.

Q. What is the purpose of the bike lockers at some of the park and ride lots?

- A. To provide storage facility to commuting bicycling public.

For any additional questions, please call park and ride unit at (213) 897-4057.

HOV VIOLATION FINES

The fine for an HOV violation is currently \$271.00.

The occupancy fine, based on the vehicle code (Section 21655.5), is as follows for all the courts:

\$100.00	Fine
<u>\$170.00</u>	Assessment (based on \$17.00 per every \$10.00 fine)
\$270.00	Minimum Fine
<u>\$ 1.00</u>	If Night Court is included
\$271.00	

The above fine is also the same for crossing the buffer section of an HOV lane (Vehicle Code Section 21655.8). The first HOV offense is \$271.00, the second offense is \$406.00, and the third offense is \$675.00.

SUMMARY OF HOV FACILITIES

- ◆ **STATUS OF HOV PROJECTS**
- ◆ **CURRENT HOV VOLUMES**
- ◆ **TRAVEL TIME DATA**
(Comparison of HOV Lanes vs. Mixed Flow Lanes)
- ◆ **TOTAL NUMBER OF CARPOOLS ON FREEWAYS**
(Comparison of Freeways with HOV Lanes vs. Freeways without HOV lanes)
- ◆ **CHANGES IN 2001 - 2002**
- ◆ **HOV PROJECTS SCHEDULED FOR COMPLETION IN 2003 - 2004**

SUMMARY OF HOV OPERATIONS

The following is a summary of HOV operations for District 7 in the year 2002:

- ◆ By the end of 2002, Los Angeles County had **429 lane miles** of HOV facilities, or 39% of the total 1112 HOV lane miles in the State of California. The Southern California region of 5 counties (Los Angeles, Ventura, Orange, San Bernardino, and Riverside) were reporting a total of 764 lane miles of HOV, excluding the Route 91 Toll Road in Orange County, which is 40 HOV lane miles.
- ◆ On average, HOV facilities in Los Angeles County carried **1300 vehicles per hour** or **3200 people per hour**, during peak hours. These volumes well exceed the minimum expected volume of 800 vehicles per hour or 1800 people per hour, as specified in the HOV Guidelines for Planning, Design, and Operations.
- ◆ On average, the person-trip volume of an HOV lane was 1.8 times greater than that of a mixed-flow lane during peak hours. (i.e., 1.8 regular lanes are needed to carry an equal number of people in the HOV lane.)
- ◆ The average violation rate was 0.85%, which is substantially lower than the preferable rate of below 10%, as specified in the HOV Guidelines for Planning, Design, and Operations.
- ◆ Since 1992, the total number of carpools on freeways with HOV lanes has increased steadily, whereas on freeways without HOV lanes, the total number of carpools has remained relatively constant or decreased. From 1992 to 2002, the data indicates an increase of 74% in the total number of carpools on freeways with HOV lanes for the morning peak 2-hour period. Significant increases in carpools were also observed in the afternoon peak 2-hour period. (For details, see tables and charts titled "Number of Carpools on Freeways.")
- ◆ On average, the peak hour volume was 11%, and the peak 2-hour volume was 21% of the daily HOV traffic volume, excluding the El Monte Busway data, which has the 3+ occupancy requirement during peak hours.
- ◆ The average volume on HOV facilities during peak hours represents a level of service C, while most of the mixed-flow lanes have a level of service E-F during peak hours.
- ◆ California has the highest carpooling rate in the nation currently at 14%, and has held steady, while other states have seen declining carpooling rates, over the years.
- ◆ The HOV facilities in Los Angeles County carried approximately **310,000 vehicles** or **702,000 people per day** during 2002, which is an increase from 2001's daily volumes by 29,000 vehicles and 66,000 people.
- ◆ On average, HOV lane users saved more than half a minute per mile, compared to mixed-flow traffic during peak hours.
- ◆ Some HOV facilities carried over 40% of the entire freeway's people in just 25% of the freeway's space (1 out of 4 lanes), while the adjacent mixed-flow lanes each carried under 20% of the entire freeway's people in the same 25% space.

STATUS OF HOV PROJECTS

ROUTE	E.A.	COST	FREEWAY MILES				OPENING DATE
			\$ (MIL)	IN SERVICE	IN CONST.	IN DESIGN	
LA-10 17.0/28.0 Alameda to El Monte		58.00	11.00				1973
LA-91 6.4/16.7 Rte 110 to Rte 605 E/B			---				06/10/85
LA-91 6.4/16.7 Rte 110 to Rte 605 W/B	115864	2.00	10.30				03/11/93
LA-405 13.0/20.7 Rte 110 to 120th St.	106734	8.30	7.70				04/08/93
LA-405 SB 0.0/2.2 Bellflower to Rte 605	005854	4.50	---				10/2/93(6/97)
LA-105 2.2/18.2 Rte 405 to Rte 605		230.00	16.00				10/14/93
LA-210 25.0/43.5 Rte 134 to Sunflower Ave.	129104	13.20	18.50				12/16/93
LA-405 20.2/22.2 120th St. to Century Blvd.	105 CCO	---	2.00				01/94
LA-91 16.7/20.7 Rte 605 to Co. line (S)	115834	0.90	4.00				11/94
LA-134 0.0/5.1 Rte 101/170 to Rte 5	120284	7.10	5.10				10/02/95
LA-170 14.5/20.6 Rte 101/134 to Rte 5	120274	7.90	6.10				02/11/96
LA-134 5.5/9.7 Rte 5 to Rte 2	107734	5.70	4.20				03/12/96
LA-210 HOV Ramps at Fair Oaks	019594	3.50	0.40				05/30/96
LA-110 9.8/20.5 Rte 91 to Adams Blvd.(Elev)		344.00	10.70				6/26/96(7/97)
LA-134 9.7/13.3 Rte 2 to Rte 210	118504	9.00	3.60				08/30/96
LA-405 38.5/48.6 Rte 101 to Rte 5	120334	15.10	10.10				10/22/96
LA-10 28.0/31.1 Baldwin to Rte 605 (S)	008061	5.40	STAGE 1				Median Barrier
LA-10 31.1/33.5 Rte 605 to Puente (S)	005881	3.40	STAGE 1				Median Barrier
LA-118 0.0/11.4 Ven Co Line to Rte 5 (S)	115054	22.40	11.40				03/07/97
LA-605 3.8/10.8 South. St. to Telgrph Rd.	119394	10.80	7.00				04/02/97
LA-57 0.0/4.5 Co line to Rte 60	115034	19.00	4.50				08/22/97
LA-30 0.0/2.3 Sunflower to Fthill Blvd.	119981	10.00	2.30				09/08/97
LA-405 0.0/7.6 Ora Co line to Rte 710 (S)	116874	24.80	7.60				02/12/98
LA-605 10.8/20.7 Telgrph Rd to Rte 10	119944	23.00	9.90				04/03/98
LA-14 27.0/33.4 SF Rd. to Sand Cny (S)	116204	23.20	6.40				05/05/98
LA-405 7.6/13.7 Rte 710 to Rte 110	115174	24.20	6.10				10/08/98
LA-60 23.0/25.4 Brea Cny to Rte 57 N	119234	5.00	2.40				02/02/99
LA-60 25.4/30.5 57 N to Co. line	115044	25.00	5.10				02/02/99
LA-14 33.4/43.3 Sand Cny to Escondido (S)	125604	31.00	9.90				09/23/99
LA-605 0.0/3.8 Ora. Co. Line to South St.	134704	14.60	3.80				03/01
LA-405 31.9/39.7 S/B Only Waterford to Rte 101	166704	15.60	7.80				01/08/02
LA-14 43.3/54.5 Escondido to Pearlblsm	117104	29.00	11.20				07/29/02
LA-14 24.8/27.1 Rte 5 to S.F. Road	119844	4.60	2.30				08/03/02
LA-210 2.3/8.3 Foothill Bl. to SBD Co. Line	105014	264.00	6.00				11/24/02
LA-10 28.0/31.2 Baldwin to Rte 605	106954	57.00		3.20			09/04
LA-10 42.4/48.3 Rte 57 to Co line	122404	80.00		5.90			12/04
LA-405 21.3/26.4 Century to Rte 90	1198U4	26.90		5.10			12/05
LA-60 22.4R/25.0R (57/60 Direct Connector)	1257U3	64.89		2.60			10/06
LA-5 39.4/45.6 Rte 118 to Rte 14	122001	14.80			6.20		06/05
LA-14 54.5R/60.7R Pearlblsm to Ave P-8	125201	24.00			6.20		05/07
LA-60 11.7/23.0R Rte 605 to Brea Canyon Rd	129401	75.00			11.30		01/08
LA-71 0.5/4.5 Express-Freeway Conversion	210601	138.00			4.00		02/09
LA-5 44.3R/45.9R (5/14 Direct Connector)	168001	53.00			1.60		07/09
LA-5 26.7/36.4 Rte 134 to Rte 170	121801	44.10			9.70		12/09
LA-5 36.4/39.4 Rte 170 to Rte 118	121901	55.60			3.00		12/09
LA-10 31.2/33.4 Rte 605 to Puente Ave.	117071	99.80			2.20		07/10
LA-10 33.4/37.5 Puente Ave to Citrus St	117080	71.30				4.10	07/13
LA-10 37.5/42.4 Citrus St to Rte 57	119340	37.05				4.90	07/13
LA-405 25.9/29.5 Rte 90 to Rte 10	117890	97.70				3.60	02/06
LA-5 22.6/27.1 Rte 2 to Rte 134	12120K	136.00	Inactive			4.50	03/09 (RTL)
LA-5 18.4/22.4 Rte 10 to Rte 2	12160K	128.00	Inactive			4.00	03/09 (RTL)
LA-405 29.5/39.5 Rte 10 to Rte 101	120300	180.00				10.00	04/16
LA-5 0.0/14.6 Ora Co. Line to Rte 710 (Ultimate)	21590K	1500.00				14.60	
LA-10 5.5/14.8 Rte 405 to Rte 110	12340K	155.00	No Res. Unit			9.30	
LA-710 26.5/32.7R Rte 10 to Rte 210	020090	---				6.20	
COLOR MAP SUBTOTAL - INTEGRATED PLAN		4302.34	213.40	16.80	44.20	61.20	335.60

S = Stip Project, State money involved

No 'S' = Prop C, Federal money involved

Rev Date 07/28/03

CURRENT HOV VOLUMES **

HOV LANE CAPACITY IS 1650 VPH

2002

Route	Location	Post Mile	Count Date	2+ Peak Hour Volume	3+ Peak Hr Volume	Dir.	HOV Lane Peak Hour	Peak 2 Hr HOV Volume	Occup. Rqmt.	Peak Period Violation Rate	HOV ADT (vehicles)	Corridor HOV ADT
10	Jackson Ave.	25.09	6-6-02	-----	1226	W/B	7:15-8:15 A.M.	2148	3+ (2+ off peak)	3.39%	12055	22627
	Jackson Ave.	25.09	6-5-02	-----	1081	E/B	4:15-5:15 P.M.	2364	3+ (2+ off peak)	11.50%	10572	
14	Golden Valley	29.68	2-5-02	1363	72	S/B	6:30-7:30 A.M.	2199	2+ (1+ off peak)	0.22%	9554	18675
	Golden Valley	29.68	2-6-02	1163	181	N/B	4:00-5:00 P.M.	2128	2+ (1+ off peak)	0.26%	9121	
57	Pathfinder O.C.	3.16	7-16-02	1214	149	S/B	6:45-7:45 A.M.	2224	2+	0.00%	10808	21187
	Pathfinder O.C.	3.16	7-18-02	1153	231	N/B	3:45-4:45 P.M.	2266	2+	0.26%	10379	
60	Phillips Ranch	28.04	9-10-02	1384	110	W/B	7:30-8:30 A.M.	2741	2+	0.07%	14857	26772
	Phillips Ranch	28.04	9-11-02	1258	156	E/B	3:45-4:45 P.M.	2437	2+	0.24%	11915	
91	Wilmington Ave.	9.16	6-20-02	1358	104	W/B	7:00-8:00 A.M.	2426	2+	0.44%	7498	-----
	Wilmington Ave.	9.16	6-27-02	1241	166	E/B	4:30-5:30 P.M.	2311	2+	0.00%	8873	
	Bloomfield Ave.	19.17	7-24-02	1449	114	W/B	7:00-8:00 A.M.	2759	2+	0.62%	12658	
	Artesia Blvd.	19.43	7-24-02	1561	236	E/B	3:15-4:15 P.M.	2988	2+	0.06%	11764	
105	Long Beach Blvd.	11.51	9-19-02	1587	208	W/B	7:30-8:30 A.M.	2980	2+	0.75%	12051	24868
	Long Beach Blvd.	11.51	9-18-02	1352	201	E/B	4:00-5:00 P.M.	2620	2+	0.44%	12817	
110*	Slauson P.O.C.	17.98	9-5-02	3200	263	N/B	7:15-8:15 A.M.	5783	2+	0.06%	25581	53687
	Slauson P.O.C.	17.98	10-8-02	2546	396	S/B	4:15-5:15 P.M.	4751	2+	0.43%	28106	
118	Reseda Ave.	5.81	9-11-02	1053	107	W/B	7:00-7:15 A.M.	1937	2+	0.28%	5004	10300
	Reseda Ave.	5.81	9-4-02	1019	121	E/B	4:30-5:30 P.M.	1789	2+	0.20%	5296	
134	Jackson Ave.	7.41	9-26-02	781	78	W/B	7:30-8:30 A.M.	1390	2+	0.13%	5996	13523
	Jackson Ave.	7.41	11-14-02	833	74	E/B	4:15-5:15 P.M.	1599	2+	0.00%	7527	
170	Sherman Way	18.27	2-26-02	773	81	S/B	7:00-8:00 A.M.	1452	2+	0.13%	4705	9075
	Sherman Way	18.27	1-24-02	537	81	N/B	4:15-5:15 P.M.	1001	2+	0.00%	4370	
210	Wilson Ave O.C.	26.57	3-20-02	1028	83	W/B	7:15-8:15 A.M.	1908	2+	1.25%	12510	35489
	Wilson Ave O.C.	26.57	8-6-02	1341	225	E/B	4:15-5:15 P.M.	2503	2+	0.30%	22979	
	Second St. O.C.	39.12	9-24-02	1589	181	W/B	6:45-7:45 A.M.	2727	2+	0.06%	7159	
	Second St. O.C.	39.12	10-1-02	1463	220	E/B	4:30-5:30 P.M.	2709	2+	0.14%	4648	
405	Normandie	13.81	11-14-02	1463	100	N/B	7:00-8:00 A.M.	2700	2+	0.68%	13062	26439
	Normandie	13.81	10-24-02	1509	223	S/B	4:00-5:00 P.M.	2847	2+	0.07%	13377	
	Burbank Blvd.	40.28	10-17-02	1340	113	S/B	6:30-7:30 A.M.	2430	2+	0.00%	8397	
	Burbank Blvd.	40.28	9-24-02	1210	166	N/B	4:00-5:00 P.M.	2354	2+	0.88%	6540	
605	Beverly Blvd.	14.42	7-30-02	1253	136	S/B	6:30-7:30 A.M.	2382	2+	0.80%	9922	22851
	Beverly Blvd.	14.41	9-5-02	1527	142	N/B	4:30-5:30 P.M.	3008	2+	0.07%	12929	
Total Vehicles / Day											309915	
Total People / Day											702177	

Avg. occupancy for a 2+ facility is 2.2 and for a 3+ is 3.1 (excluding buses).

Note: ADT data is not necessarily taken at the same count locations.

* 2 lane HOV facility.

** Volume for Carpools, Vanpools, Motorcycles, and Buses. Excluding Violators.

Travel Time Data (HOV Lane versus Mixed Flow Lane)

ROUTE	LIMITS	LENGTH	PEAK DIRECTION	TRAVEL TIME		HOV LANE TIME SAVINGS
				Mixed Flow	HOV	
10 / San Bernardino Freeway	Alameda to El Monte	11 mi.	Westbound (AM) Eastbound (PM)	27 min. - 40 sec. 32 min. - 45 sec.	11 min. - 16 sec. 11 min. - 32 sec.	16 min. - 24 sec. * 21 min. - 13 sec. *
14 / Antelope Valley Freeway	Route 5 to Pearlblossom	29.8 mi.	Southbound (AM) Northbound (PM)	27 min. - 09 sec. 29 min. - 52 sec.	23 min. - 42 sec. 24 min. - 05 sec.	03 min. - 27 sec. *** 05 min. - 47 sec. ****
57 / Orange Freeway	Route 60 to Orange Co. Line	4.5 mi.	Southbound (AM) Northbound (PM)	10 min. - 57 sec. 12 min. - 15 sec.	03 min. - 08 sec. 10 min. - 31 sec.	07 min. - 49 sec. 01 min. - 44 sec.
60 / Pomona Freeway	Brea Canyon to S.B. Co. Line	7.5 mi.	Westbound (AM) Eastbound (PM)	08 min. - 23 sec. 08 min. - 32 sec.	05 min. - 45 sec. 06 min. - 05 sec.	02 min. - 38 sec. 02 min. - 27 sec.
91 / Artesia Freeway	Route 110 to Orange Co. Line	14.3 mi.	Westbound (AM) Eastbound (PM)	24 min. - 12 sec. 28 min. - 06 sec.	13 min. - 12 sec. 13 min. - 06 sec.	11 min. - 00 sec. **** 15 min. - 00 sec. ****
105 / Century Freeway	Route 405 to Route 605	16 mi.	Westbound (AM) Eastbound (PM)	38 min. - 31 sec. 35 min. - 46 sec.	23 min. - 40 sec. 28 min. - 51 sec.	14 min. - 51 sec. 06 min. - 55 sec.
110 / Harbor Freeway	Route 91 to Adams Blvd	10.7 mi.	Northbound (AM) Southbound (PM)	16 min. - 16 sec. 13 min. - 44 sec.	09 min. - 28 sec. 08 min. - 44 sec.	06 min. - 48 sec. 05 min. - 00 sec.
118 / Simi Valley Freeway	Route 5 to Ventura Co. Line	11.4 mi.	Westbound (AM) Eastbound (PM)	12 min. - 51 sec. 12 min. - 58 sec.	09 min. - 38 sec. 09 min. - 27 sec.	03 min. - 13 sec. *** 03 min. - 31 sec. ***
134 / Ventura Freeway	Route 5 to Route 210	7.8 mi.	Westbound (AM) Eastbound (PM)	09 min. - 06 sec. 08 min. - 15 sec.	07 min. - 04 sec. 07 min. - 20 sec.	02 min. - 02 sec. 00 min. - 55 sec.
134 / Ventura Freeway	Route 101/170 to Route 5	5.1 mi.	Westbound (AM) Eastbound (PM)	04 min. - 12 sec. 09 min. - 24 sec.	04 min. - 03 sec. 04 min. - 56 sec.	00 min. - 09 sec. 04 min. - 28 sec.
170 / Hollywood Freeway	Route 101/134 to Route 5	6.1 mi.	Southbound (AM) Northbound (PM)	06 min. - 44 sec 11 min. - 52 sec.	05 min. - 59 sec. 05 min. - 29 sec.	00 min. - 45 sec. 06 min. - 23 sec.
210 / Foothill Freeway	Route 134 to S.B. Co. Line	26.8 mi.	Westbound (AM) Eastbound (PM)	61 min. - 15 sec. 69 min. - 22 sec.	35 min. - 08 sec. 53 min. - 59 sec.	26 min. - 07 sec. ** 15 min. - 23 sec. **
405 / San Diego Freeway	Route 5 to Waterford Route 101 to Route 5	17.9 mi. 10.1 mi.	Southbound (AM) Northbound (PM)	51 min. - 54 sec. 19 min. - 53 sec.	26 min. - 59 sec. 09 min. - 14 sec.	24 min. - 55 sec. ** 10 min. - 39 sec.
405 / San Diego Freeway	Century Blvd to Orange Co. Line	25.6 mi.	Northbound (AM) Southbound (PM)	21 min. - 29 sec. 33 min. - 46 sec.	18 min. - 29 sec. 27 min. - 56 sec.	03 min. - 00 sec. 05 min. - 50 sec.
605 / San Gabriel River Freeway	Orange Co. Line to Route 10	20.7 mi.	Southbound (AM) Northbound (PM)	25 min. - 44 sec. 30 min. - 32 sec.	17 min. - 37 sec. 19 min. - 05 sec.	08 min. - 07 sec. 11 min. - 27 sec.

Data collected Tuesday, Wednesday, or Thursday in the peak direction during the week of March 31st, April 14th, and 28th, 2003.

Travel time runs conducted at 8am and 5pm in the peak direction

* Effective 7/24/00, 3 or more persons per vehicle required during peak hours (5-9 a.m.; 4-7 p.m.; Mon - Fri.)

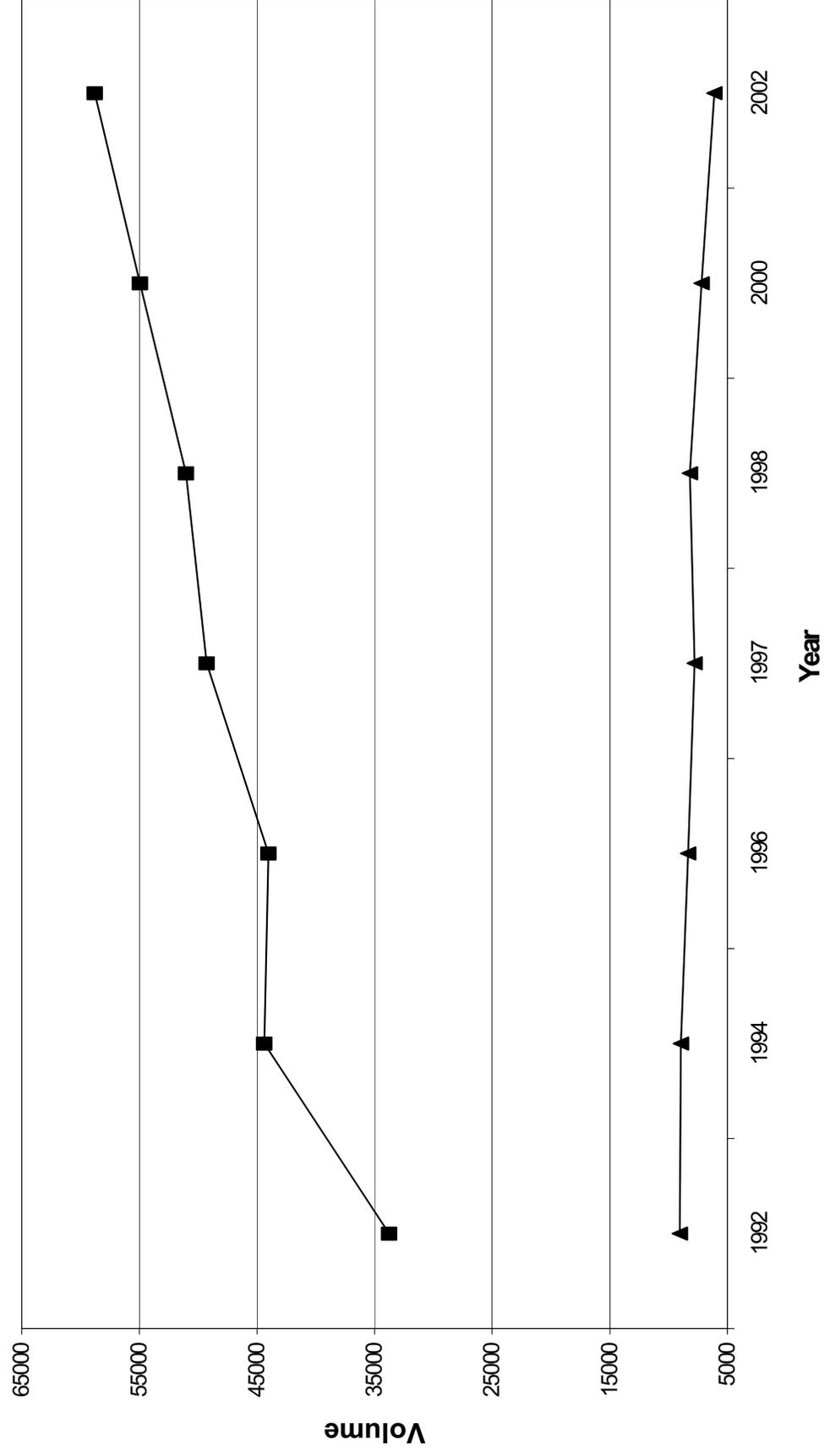
** In operation for less than three years. (Route 210...from Foothill Blvd. to SBD Co. Line; Route 405...From Waterford to Rte 101 S/B only)

*** This project included the addition of an HOV lane and regular freeway lane.

**** In operation for less than 3 yrs.; and part-time use of HOV lanes effective 01/01/01 (2+ during peak hours S/B 5-9am; N/B 3-7pm).

***** Temporary HOV lane closure from Pioneer Blvd. to Ora. Co. Line. Travel time study was conducted from Route 110 to Pioneer Blvd. (11.2 mi.)

Total Number of Carpools on Freeways (AM Peak 2-Hour)



Note: The volume on freeways w/ HOV lanes is the total carpool volume at various locations on freeways, I-10, SR-14, SR-57, SR-60, SR-91, I-105, I-110, SR-118, SR-134, SR-170, I-210, I-405, and I-605.
 The volume on freeways w/o HOV lanes is the total carpool volume at various locations on freeways, SR-2, I-5, US-101, and I-710.

Number of Carpools on Freeways (PM Peak 2-Hour)

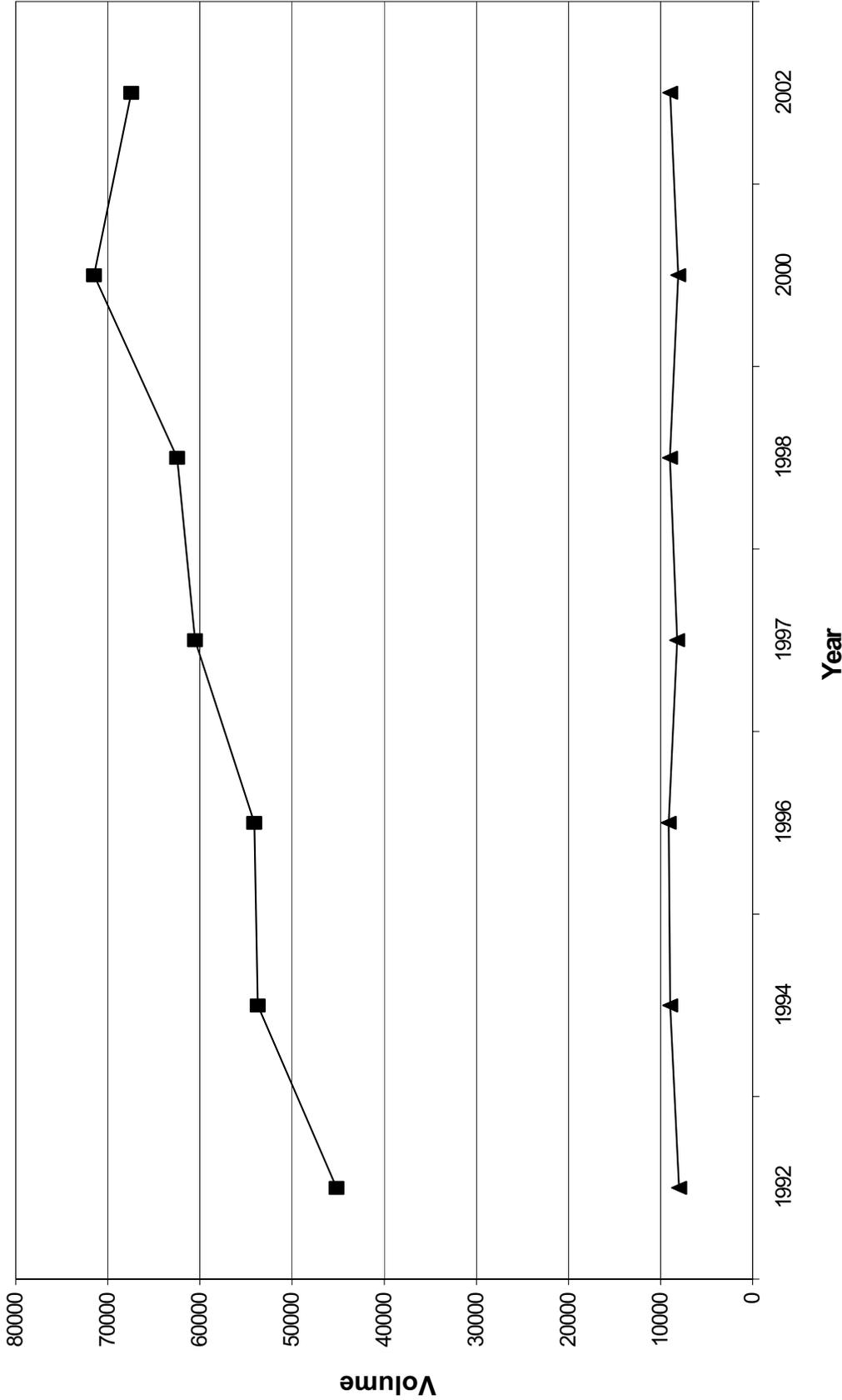
Route	Length of HOV Lanes	Opening Date of HOV Lanes	Location	PM Peak 2-Hour Number of Carpools in HOV lanes						PM Peak 2-Hour Total Number of Carpools on freeway						
				Base Year 1992	1994	1996	1997	1998	2000	2002	Base Year 1992	1994	1996	1997	1998	2000
10 *	11 Miles	Jan-73	Warwick	1956	1789	1858	1697	1878	2194	2102	2550	2377	2113	1802	2100	2739
14	6.4 Miles	May-98	Golden Valley	1972	1972	1709	1253	1575	1926	2290	2322	2322	1834	1383	1740	2476
57	4.5 Miles	Aug-97	Pathfinder	-	-	-	2020	1590	2397	2196	2305	2505	1475	2970	2815	3427
60	7.5 Miles	Feb-99	Phillips Ranch	-	-	-	-	-	2434	2352	1369	1369	1369	1901	1901	3509
91	14.3 Miles	Oct-85	Wilmington	2683	1125	2657	2282	2378	2669	2242	4653	2975	2881	3332	3828	3754
			Artesia	-	-	1926	1630	1432	2617	2904	2655	2110	3821	3170	3252	3837
105	16 Miles	Oct-93	Lakewood	-	1757	2105	1795	2055	2127	2320	-	3145	2776	2823	3053	3031
			Long Beach	-	2176	2637	2412	2517	2543	2555	-	3541	3425	2971	3297	3402
110 *	10.7 Miles	Jun-96	Stauson	-	-	2788	3351	3904	4997	4677	3270	3270	4708	5096	5544	6332
			Reseda	-	-	-	792	779	1478	1761	1609	1609	1811	1822	2054	3218
118	11.4 Miles	Mar-97	Porter Ranch	-	-	-	766	751	1315	1818	1984	2126	1789	2461	2301	3090
			Jackson	-	-	1200	1491	1547	1931	1553	3020	2420	2555	2781	3717	3046
134	12.9 Miles	Oct-95	Pass	-	-	1068	1072	1075	1411	1337	1955	2445	2488	2357	2320	2716
			Sherman Way	-	-	868	1019	1007	998	978	1915	2025	2023	2359	2437	2038
210	18.5 Miles	Dec-93	2nd St.	-	2451	2422	2751	2691	2824	2646	3150	4686	4002	4381	3906	4539
			Wilson	-	2209	2524	2776	2603	3245	2450	3432	4759	4816	5788	5273	5459
405	10.1 Miles	Oct-96	Burbank	-	-	1141	1569	1558	2306	2271	2705	3215	2856	3659	3568	3746
			Normandie	-	1536	1536	-	2049	2717	2783	2205	2205	2816	3559	3559	4087
605	16.9 Miles	Apr-97	Beverly	-	-	-	1286	1286	3092	2957	2305	3155	2695	2825	2721	3757
			Total	6611	15015	26439	29962	34503	47268	46272	45172	53719	54087	60528	62474	71495
			% Change From Base Year													
2			Trentway													
5			Greenwood													
101			Encino													
710			Gage													
			Total													
			% Change From Base Year													

Note: For statistical purposes, if the data of the year is not available and the facility was open at the time, the data for the following year is used.

* Volume for Carpools, Vanpools, and Buses. All other volumes are Carpools and Vanpools only.

Total Number of Carpools on Freeways (PM Peak 2-Hour)

Freeways w/ HOV Lanes
 Freeways w/o HOV Lanes



Note: The volume on freeways w/ HOV lanes is the total carpool volume at various locations on freeways, I-10, SR-14, SR-57, SR-60, SR-91, I-105, I-110, SR-118, SR-134, SR-170, I-210, I-405, and I-605.
 The volume on freeways w/o HOV lanes is the total carpool volume at various locations on freeways, SR-2, I-5, US-101, and I-710.

CHANGES IN 2001 - 2002

The following is a list of the new HOV facilities, which opened in the year 2002:

- In January of 2002, 7.8 lane-miles of carpool lanes opened on the San Diego Freeway (Route 405), between Waterford Street and the Ventura Freeway (US-101); Southbound only
- In July of 2002, 22.4 lane-miles of carpool lanes opened on the Antelope Valley Freeway (SR-14), between Escondido Canyon Road to Pearblossom Boulevard.
- In August of 2002, 4.6 lane-miles of carpool lanes opened on the Antelope Valley Freeway (SR-14), between the Golden State Freeway (Route 5) and San Fernando Road.
- In November of 2002, 12.0 lane-miles of carpool lanes opened on the Foothill Freeway (Route 210), between Foothill Boulevard and the San Bernardino County Line.

The following is a list of HOV lanes under construction in the year 2002:

- San Bernardino Freeway (Route 10), 6.4 lane-miles of carpool lanes, between Baldwin to the San Gabriel River Freeway (Route 605), is expected to open in September 2004.
- San Bernardino Freeway (Route 10), 11.8 lane-miles of carpool lanes, between the Orange Freeway (Route 57) and the San Bernardino County Line, is expected to open in December 2004.

Legislative bills were enacted in the year 2000 and 2001 that affected traffic operations and include the following:

- Senate Bill 63 which became effective January 1, 2000, reduced the minimum occupancy requirement from 3 to 2 persons per vehicle on the I-10 El Monte Busway, on a 24-hour basis. Signs were changed and the facility was monitored through electronic counts, tachometer runs, and manual counts for six months. The Department submitted an operational report to the Legislature. The conclusion – The HOV facility became congested for a couple of hours during the morning and afternoon peak periods; Buffer violations increased from vehicles exiting the congested HOV lane; Observed a significant reduction of 3-person carpools; Public inquiries increased to various agencies and officials regarding the facility.
- Assembly Bill 71 which became effective July 1, 2000, allowed certain clean air vehicles to use the State's HOV system, regardless of the number of people in the

CHANGES IN 2001 - 2002

vehicle. The Department of Motor Vehicles' decal must be displayed on the vehicle to qualify for the exemption. Signs were installed on all HOV facilities in California.

- Assembly Bill 769 which became effective July 24, 2000, overrode Senate Bill 63, and restored the 3 or more occupancy requirement during the peak hours, on the I-10 El Monte Busway. Senate Bill 63 had attracted too many users to the HOV lane and caused considerable congestion to peak hour traffic. These delays were conveyed to elected officials and various agencies. The 3 or more persons requirement is currently in effect Monday through Friday from 5-9a.m. and 4-7p.m.; The 2-person carpools are allowed to use the HOV lanes all other times. Signs were changed and the facility was monitored for five months. The Department submitted an operational report to the Legislature. The conclusion – The facility is no longer congested, however the occupancy violation rate in the peak period sometimes reaches 50%; More regulatory signs displaying the hours and occupancy requirement were added to the facility; Implemented increased presence and enforcement by the California Highway Patrol. The 3+ $\frac{1}{2}$ + variable occupancy HOV lane is still in effect with FHWA approval.
- Assembly Bill 1871 which became effective January 1, 2001, began an 18-month demonstration project to evaluate part-time use of the HOV lanes on State Route 14 between Santa Clarita and Palmdale. This project only allows carpools in the HOV lanes during peak periods (Southbound, 5-9a.m. and Northbound, 3-7p.m., Monday - Friday). Solo drivers are allowed to use the HOV lanes all other times. The double-yellow buffer lines will remain throughout the demonstration, and users still need to observe the designated openings for entering and exiting the HOV lanes. Some of the openings (ingress/egress locations) were lengthened in April 2001 to provide more access on the steep uphill grades of the facility. FHWA has agreed with the recommendation of Caltrans to continue with the part-time operation of HOV lanes on SR-14 freeway until such time as needed to convert to full-time, given the Route 5/14 direct connectors will be completed in the year 2008.

**HOV PROJECTS
SCHEDULED FOR COMPLETION IN 2003 - 2004**

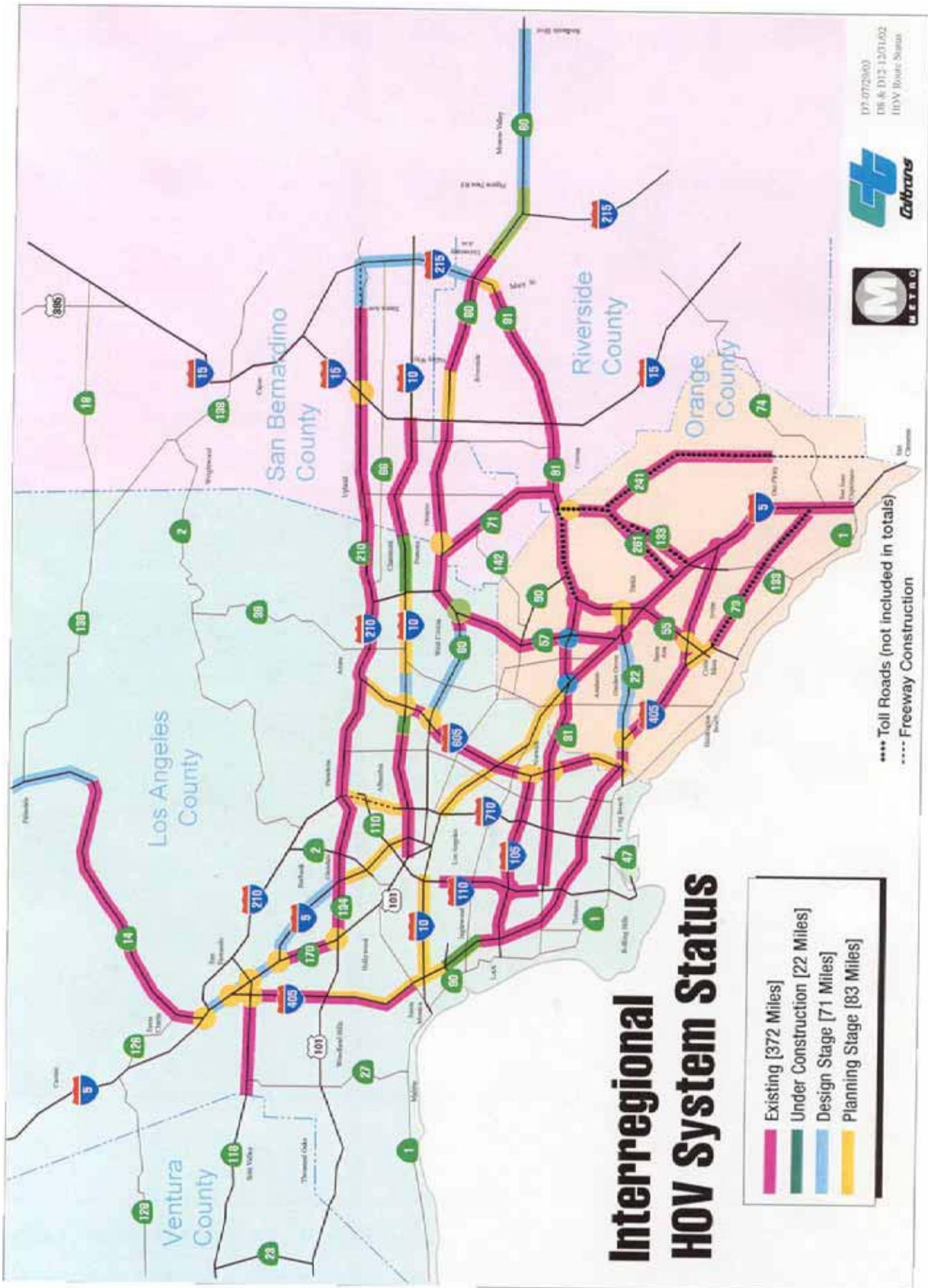
<u>ROUTE</u>	<u>POST MILE</u>	<u>PROJECT LIMITS</u>	<u>OPENING DATE</u>
LA-10	28.0/31.2	Baldwin to Route 605	09/04
LA-10	42.4/48.3	Route 57 to San Bernardino Co. Line	12/04

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HOV SYSTEM STATUS MAP

- ◆ **LOS ANGELES COUNTY**
- ◆ **INTERREGIONAL (Los Angeles, Orange, Riverside, and San Bernardino County)**



FACT SHEET AND INGRESS/EGRESS MAP



FACT SHEET

ROUTE 10 SAN BERNARDINO FREEWAY EL MONTE BUSWAY

Project Limits & Length:	FROM ALAMEDA TO EL MONTE; 11 MILES
Date of Opening:	JANUARY 1973
Cost:	\$ 58.0 MILLION
Current Peak Hr Volume:	1269 VEHICLES @ JACKSON (HOV 3+)
Park & Ride Facilities:	7 (DEL MAR, SANTA ANITA, W. COVINA PKWY, BARRANCA, VIA-VERDE, GILLETTE, and GAREY)
Number of Ingress/Egress:	4 IN EACH DIRECTION

Unique Features:

Fly over on & off ramps at Del Mar. Bus only connectors to and from I-710 north of I-10; Four on line stations at El Monte, University, Hospital, and Union Station.

SB 63 – Authored by Senator Solis – passed and was enacted January 1, 2000, which lowered the occupancy requirement from 3 or more to 2 or more persons per vehicle. Caltrans and MTA studies have predicted detrimental affects on the operation of the facility.

AB 769 – Effective July 24, 2000, overrode SB 63 and restored the 3 or more occupancy requirements during peak hours. SB 63 had attracted too many users to the HOV lane and caused considerable congestion to peak hour traffic. The 3 or more persons requirement is currently in effect Monday through Friday from 5-9 a.m. and 4-7 p.m.

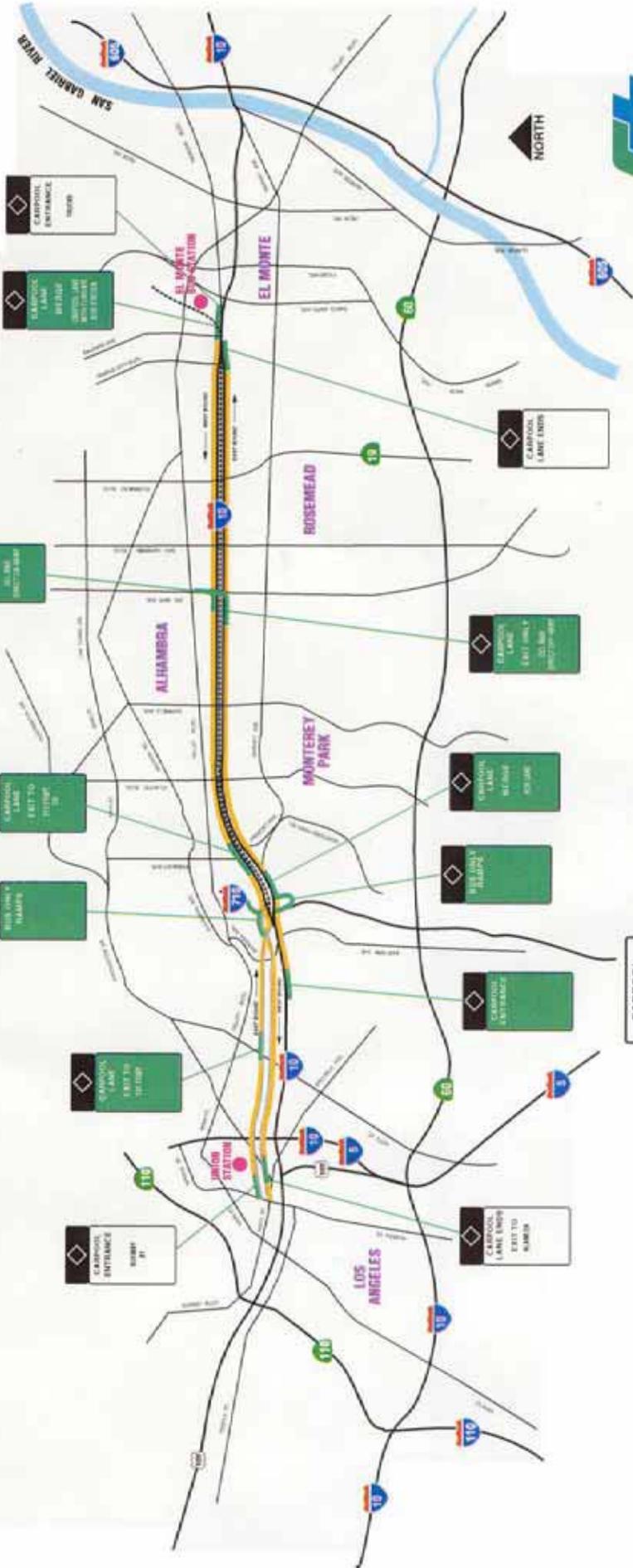


SAN BERNARDINO FREEWAY HOV LANE

Alameda St. to Baldwin Ave.

3 OR MORE PERSONS PER VEHICLE
MON-FRI 5 - 9 AM
4 - 7 PM

2 OR MORE ALL OTHER TIMES



CARPOOL VIOLATION
\$271
MINIMUM FINE

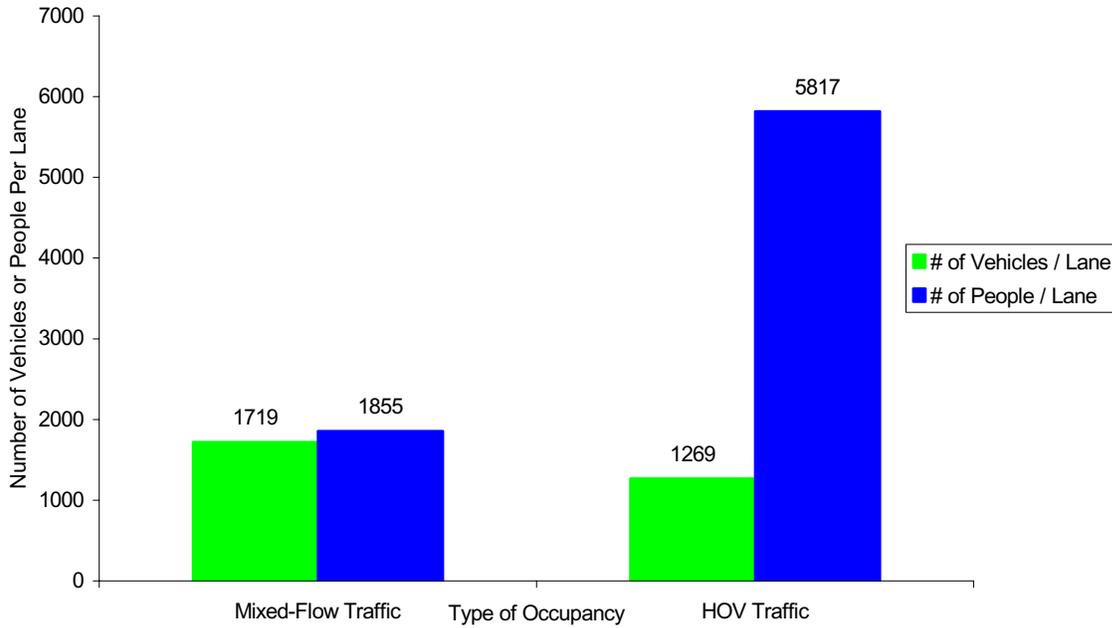


San Bernardino Department of Transportation
8001 C.D.M.M. Los Angeles Locks 21 85 -0212

Split

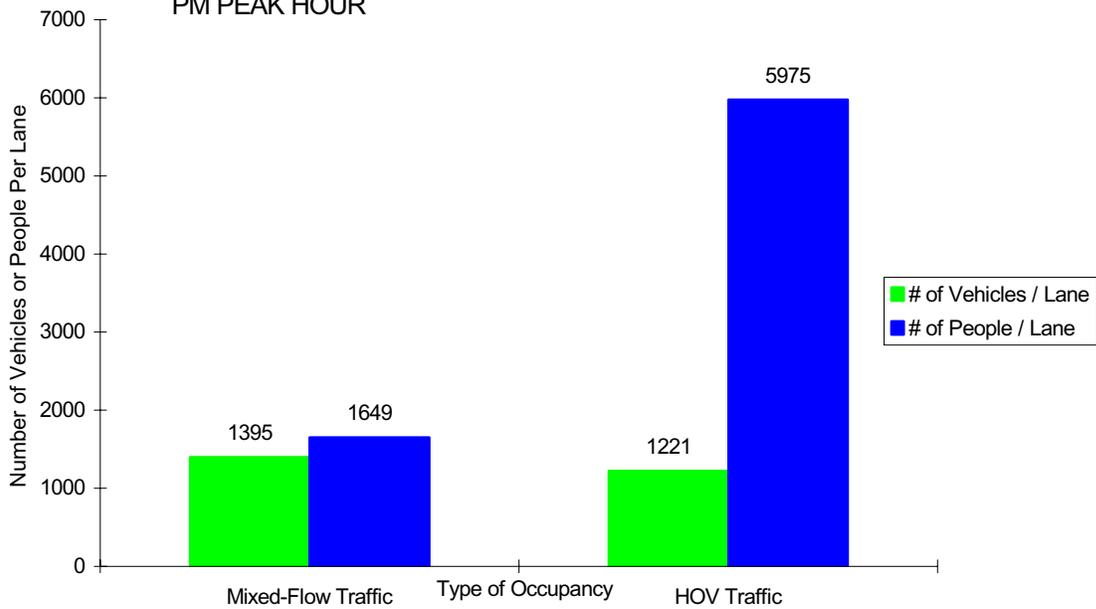
PEAK HOUR COMPARISON

AM PEAK HOUR



Location: LA-10-W/B @ Jackson Ave
Date/Time: 06-06-02 / 7:15-8:15 AM

PM PEAK HOUR



Location: LA-10-E/B @ Jackson Ave
Date/Time: 06-05-02 / 4:15-5:15 PM



FACT SHEET

ROUTE 14 ANTELOPE VALLEY FREEWAY

Project Limits & Length:	FROM SAN FERNANDO RD TO SAND CANYON	6.4 MILES
	FROM SAND CANYON TO ESCONDIDO	9.9 MILES
	FROM ESCONDIDO TO PEARBLOSSOM	11.2 MILES
	FROM ROUTE 5 TO SAN FERNANDO RD	2.3 MILES
Date of Opening:	FROM SAN FERNANDO RD TO SAND CANYON	MAY 5, 1998
	FROM SAND CANYON TO ESCONDIDO	SEP. 23, 1999
	FROM ESCONDIDO TO PEARBLOSSOM	JUL. 29, 2002
	FROM ROUTE 5 TO SAN FERNANDO RD	AUG. 3, 2002
Cost:	FROM SAN FERNANDO RD TO SAND CANYON	\$23.2 MILLION
	FROM SAND CANYON TO ESCONDIDO	\$31 MILLION
	FROM ESCONDIDO TO PEARBLOSSOM	\$29 MILLION
	FROM ROUTE 5 TO SAN FERNANDO RD	\$4.6 MILLION
Current Peak Hr Volume:	1366 VEHICLES @ GOLDEN VALLEY	
Park & Ride Facilities:	8 (SAN FERNANDO RD (3), GOLDEN VALLEY RD (3), SAND CANYON RD, and SIERRA HWY)	
Number of Ingress/Egress:	10 NORTH BOUND & 12 SOUTH BOUND	

Unique Features:

AB 1871 - Effective January 1, 2001, began an 18-month demonstration project to evaluate part-time use of the HOV lanes on State Route 14. This project only allows carpools in the HOV lanes during peak periods (Southbound, 5-9a.m. and Northbound, 3-7p.m., Monday - Friday). Solo drivers are allowed to use the HOV lanes all other times. The double-yellow buffer lines will remain throughout the demonstration, and users still need to observe the designated openings for entering and exiting the HOV lanes. Some of the openings (ingress/egress locations) were lengthened in April 2001 to provide more access on the steep uphill grades of the facility. FHWA has agreed with the recommendation of Caltrans to continue with the part-time operation of HOV lanes on SR-14 freeway until such time as needed to convert to full-time, given the 5/14 direct connectors will be completed in the year 2008.



ANTELOPE VALLEY FREEWAY HOV LANE

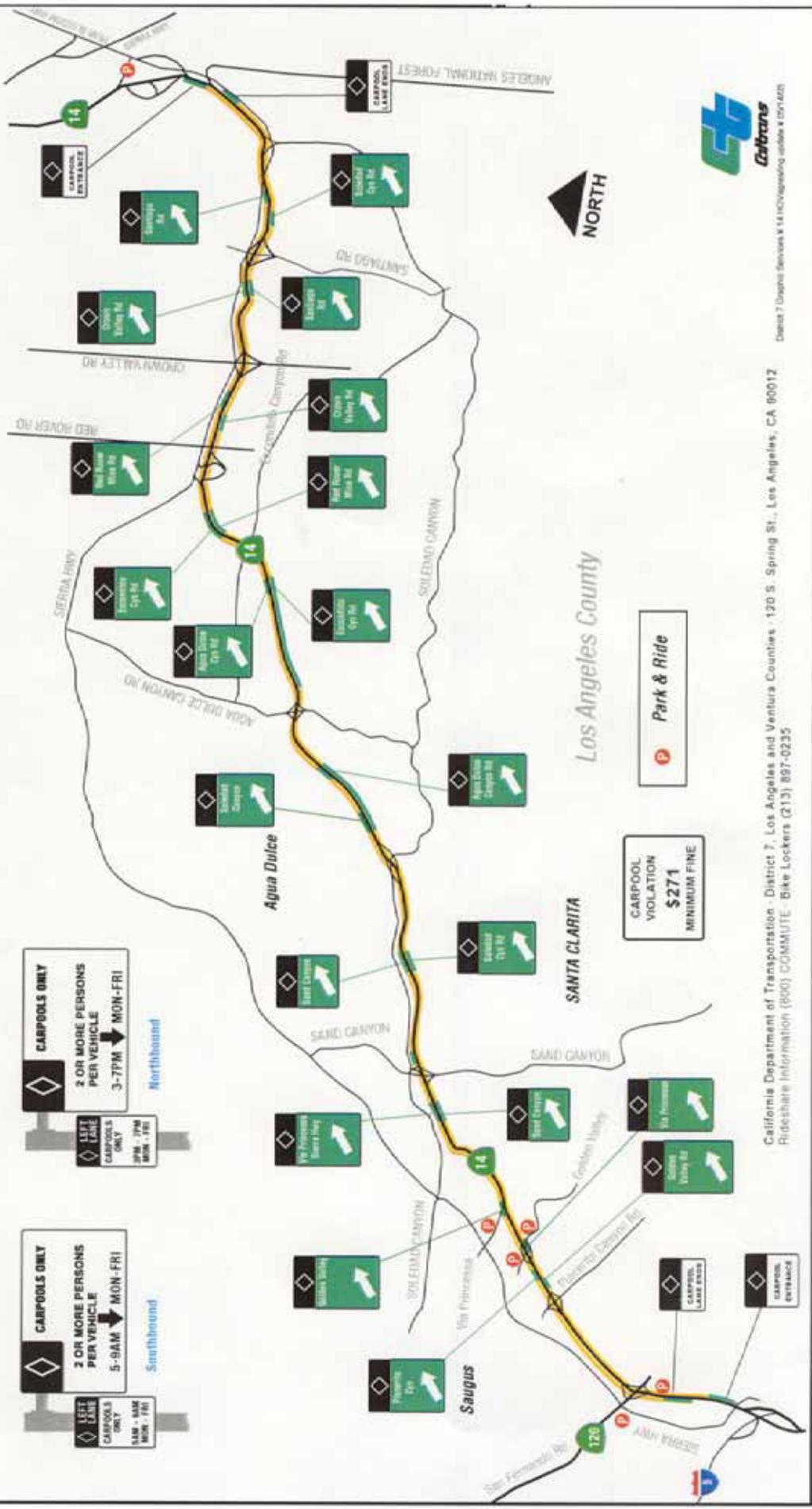
Interstate 5 (I-5) to Pearblossom Hwy

CARPPOOLS ONLY
 2 OR MORE PERSONS PER VEHICLE
 5-9AM → MON-FRI
Southbound

LEFT LANE
 CARPOOLS ONLY
 5AM - 9AM
 MON - FRI

CARPPOOLS ONLY
 2 OR MORE PERSONS PER VEHICLE
 3-7PM → MON-FRI
Northbound

LEFT LANE
 CARPOOLS ONLY
 3PM - 7PM
 MON - FRI

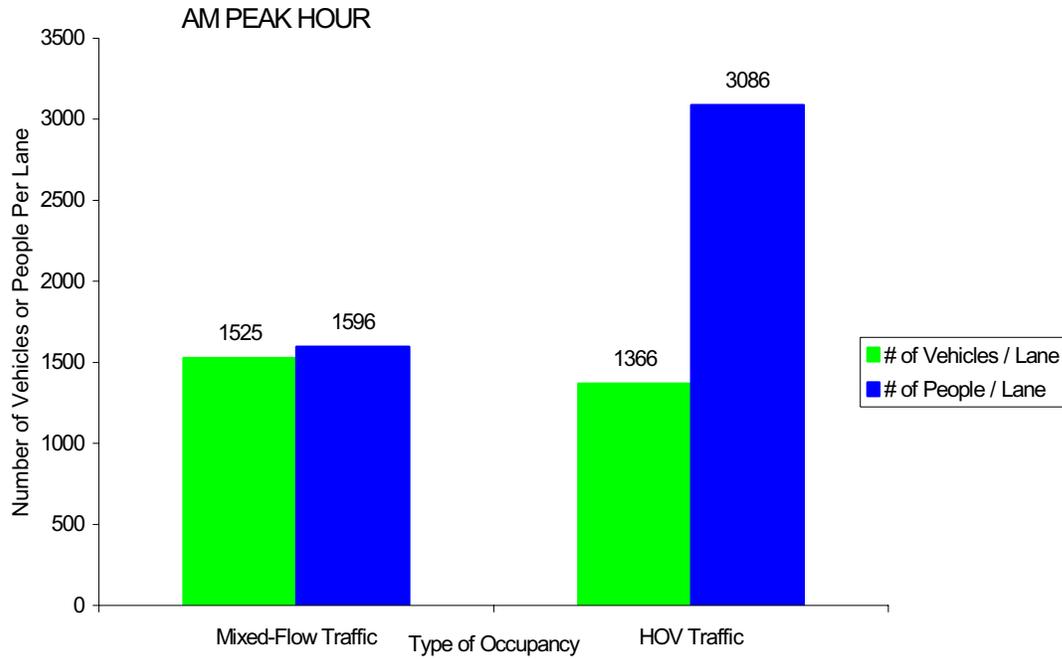


CARPPOOL VIOLATION
\$271
 MINIMUM FINE

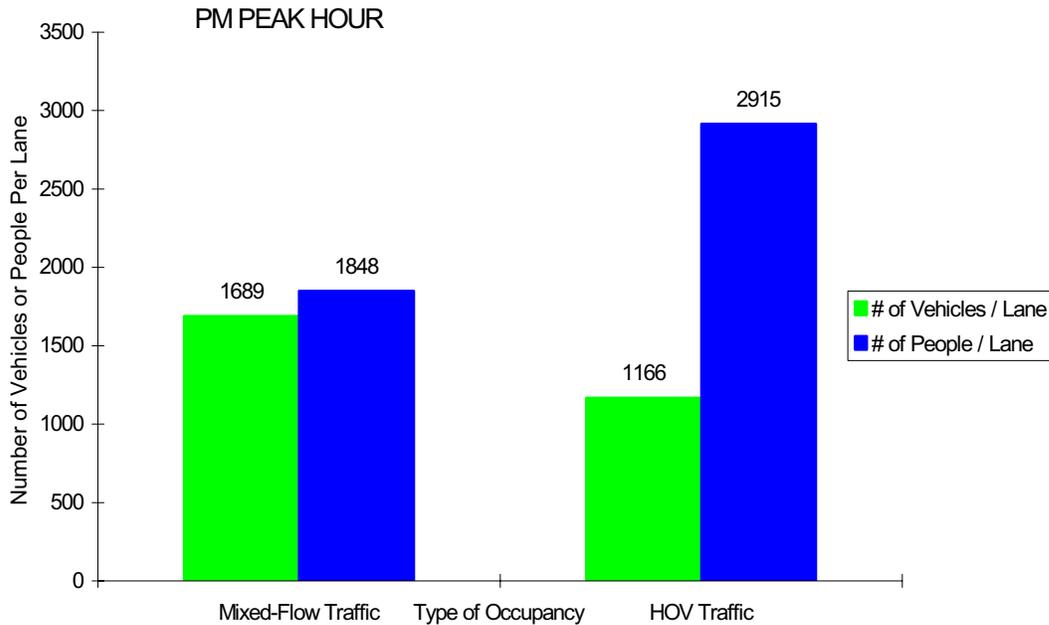
P **Park & Ride**

California Department of Transportation - District 7, Los Angeles and Ventura Counties - 120 S. Spring St., Los Angeles, CA 90012
 RideShare Information (800) COMMUTE - Bike Lockers (213) 897-0235
 Detail 7 Dispatch Services V 14 HOVsigning.slddb 4 (07/14/20)

PEAK HOUR COMPARISON



Location: LA-14-S/B @ Golden Valley
 Date/Time: 02-05-02 / 6:30-7:30 AM



Location: LA-14-N/B @ Golden Valley
 Date/Time: 02-06-02 / 4:00-5:00 PM



FACT SHEET

ROUTE 57 ORANGE FREEWAY

Project Limits & Length: FROM ROUTE 60 TO ORANGE COUNTY LINE; 4.5 MILES

Date of Opening: AUGUST 22, 1997

Cost: \$ 19.0 MILLION

Current Peak Hr Volume: 1214 VEHICLES @ PATHFINDER

Park & Ride Facilities: 1 (PATHFINDER)

Number of Ingress/Egress: 2 NORTH BOUND & 3 SOUTH BOUND

Unique Features:



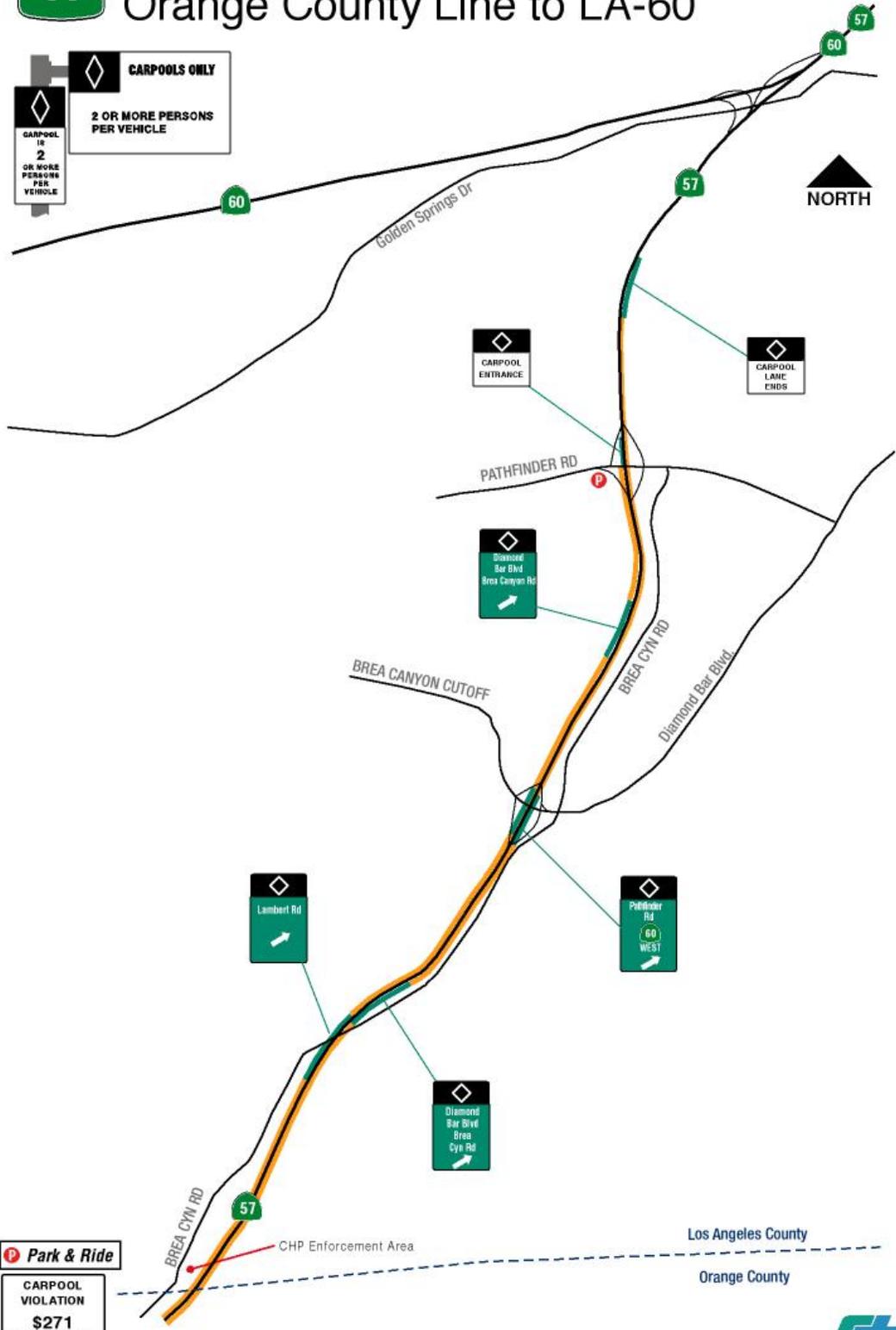
ORANGE FREEWAY HOV LANE

Orange County Line to LA-60

CARPOLS ONLY

CARPPOOL IS
2
OR MORE
PERSONS
PER
VEHICLE

2 OR MORE PERSONS PER VEHICLE



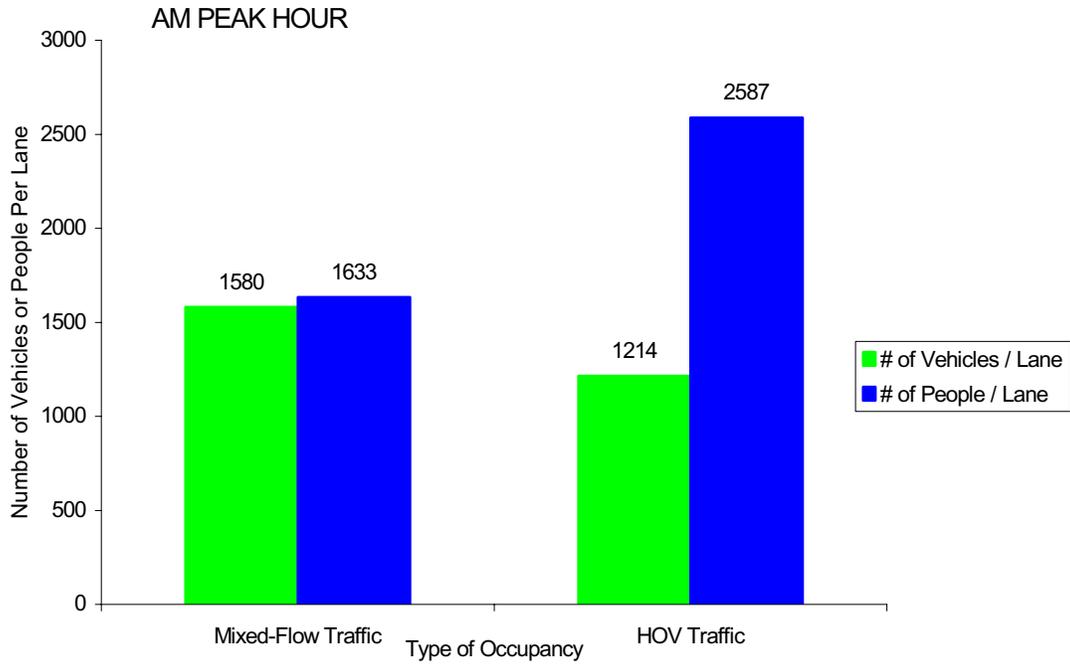
Park & Ride

CARPPOOL VIOLATION
\$271
MINIMUM FINE

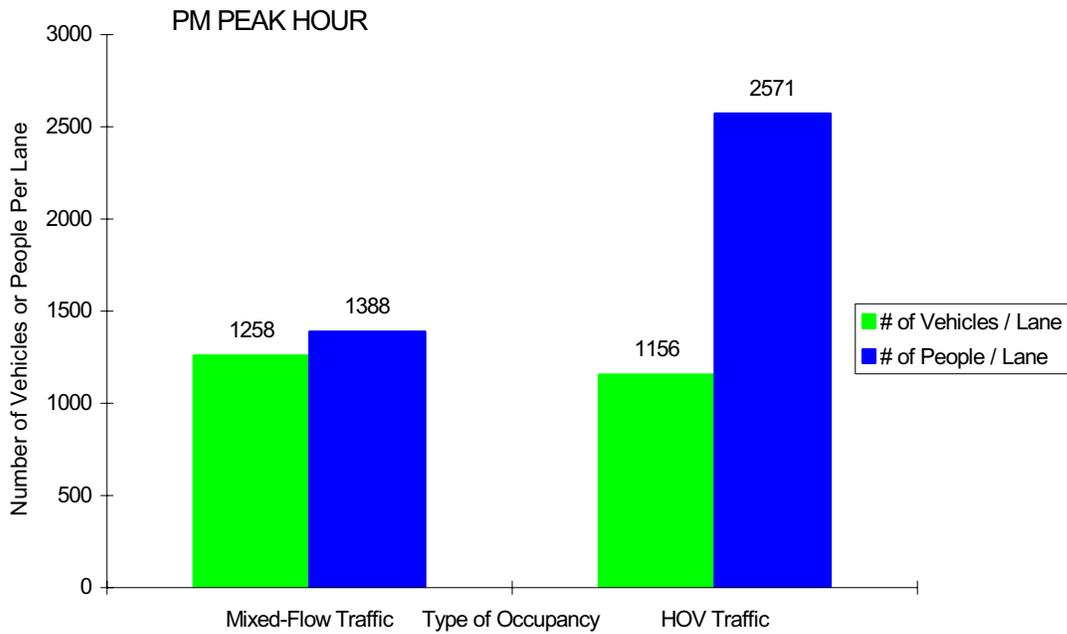
California Department of Transportation • District 7, Los Angeles and Ventura Counties • 120 S. Spring St., Los Angeles, CA 90012
 Rideshare Information (800) COMMUTE • Bike Lockers (213) 897-0235
 District 7 Graphic Services • 57 HOVregisling • 4/15/02



PEAK HOUR COMPARISON



Location: LA-57-S/B @ Pathfinder
 Date/Time: 07-16-02 / 6:45-7:45 AM



Location: LA-57-N/B @ Pathfinder
 Date/Time: 07-18-02 / 3:45-4:45 PM

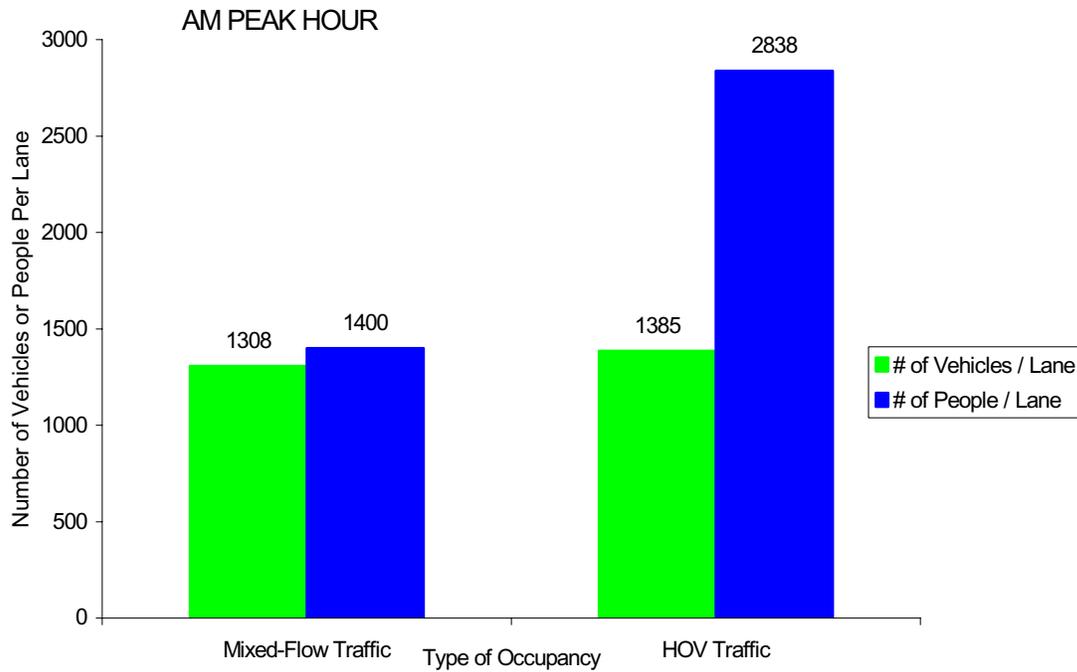


FACT SHEET

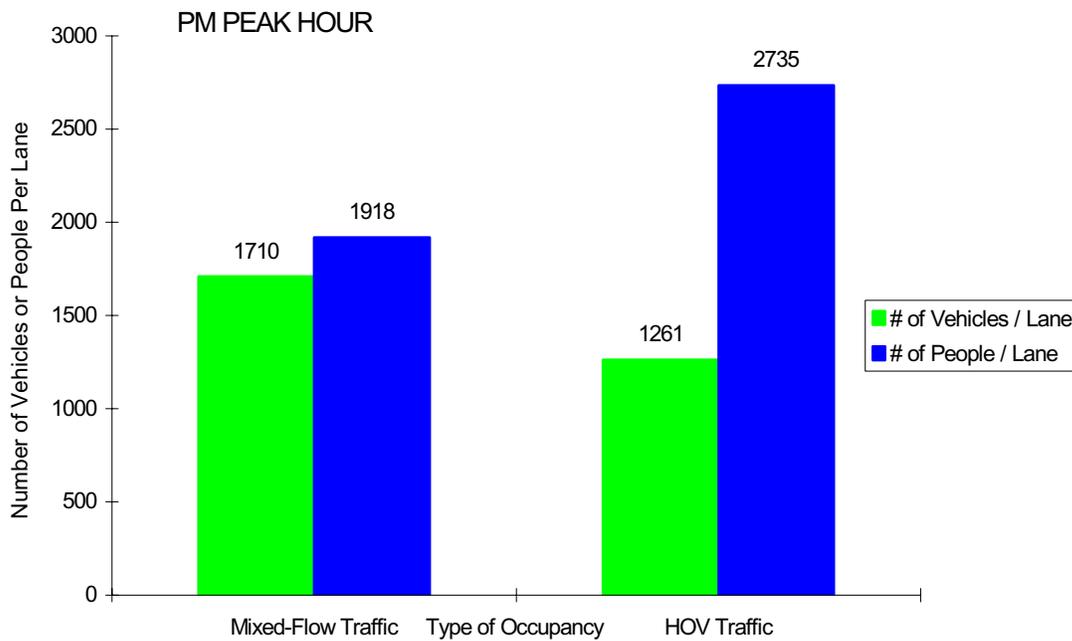
ROUTE 60 POMONA FREEWAY

Project Limits & Length:	FROM BREA CANYON TO RTE 57 N FROM RTE 57 N TO COUNTY LINE	2.4 MILES 5.1 MILES
Date of Opening:	FROM BREA CANYON TO RTE 57 N FROM RTE 57 N TO COUNTY LINE	FEB. 2, 1999 FEB. 2, 1999
Cost:	FROM BREA CANYON TO RTE 57 N FROM RTE 57 N TO COUNTY LINE	\$5 MILLION \$25 MILLION
Current Peak Hr Volume:	1385 VEHICLES @ PHILLIPS RANCH	
Park & Ride Facilities:	2 (DIAMOND BAR BLVD (2))	
Number of Ingress/Egress:	3 IN EACH DIRECTION	
Unique Features:		

PEAK HOUR COMPARISON



Location: LA-60-W/B @ Phillips Ranch
 Date/Time: 09-10-00 / 7:30-8:30 AM



Location: LA-60-E/B @ Phillips Ranch
 Date/Time: 09-11-02 / 3:45-4:45 PM



FACT SHEET

ROUTE 91 ARTESIA FREEWAY

Project Limits & Length:	FROM ROUTE 110 TO ROUTE 605 FROM ROUTE 605 TO ORANGE CO. LINE	10.3 MILES 4.0 MILES
Date of Opening:	FROM ROUTE 110 TO ROUTE 605 FROM ROUTE 110 TO ROUTE 605 FROM ROUTE 605 TO ORANGE CO. LINE	JUNE 10, 1985 (E/B) MARCH 11, 1993 (W/B) NOVEMBER 1994
Cost:	FROM ROUTE 110 TO ROUTE 605 FROM ROUTE 605 TO ORANGE CO. LINE	\$ 1.0 MILLION (E/B) \$ 1.1 MILLION (W/B) \$ 0.9 MILLION
Current Peak Hr Volume:	1364 VEHICLES @ WILMINGTON	
Park & Ride Facilities:	3 (VERMONT/182 nd , ACACIA AVE and BUTLER AVE)	
Number of Ingress/Egress:	4 EAST BOUND & 6 WEST BOUND	

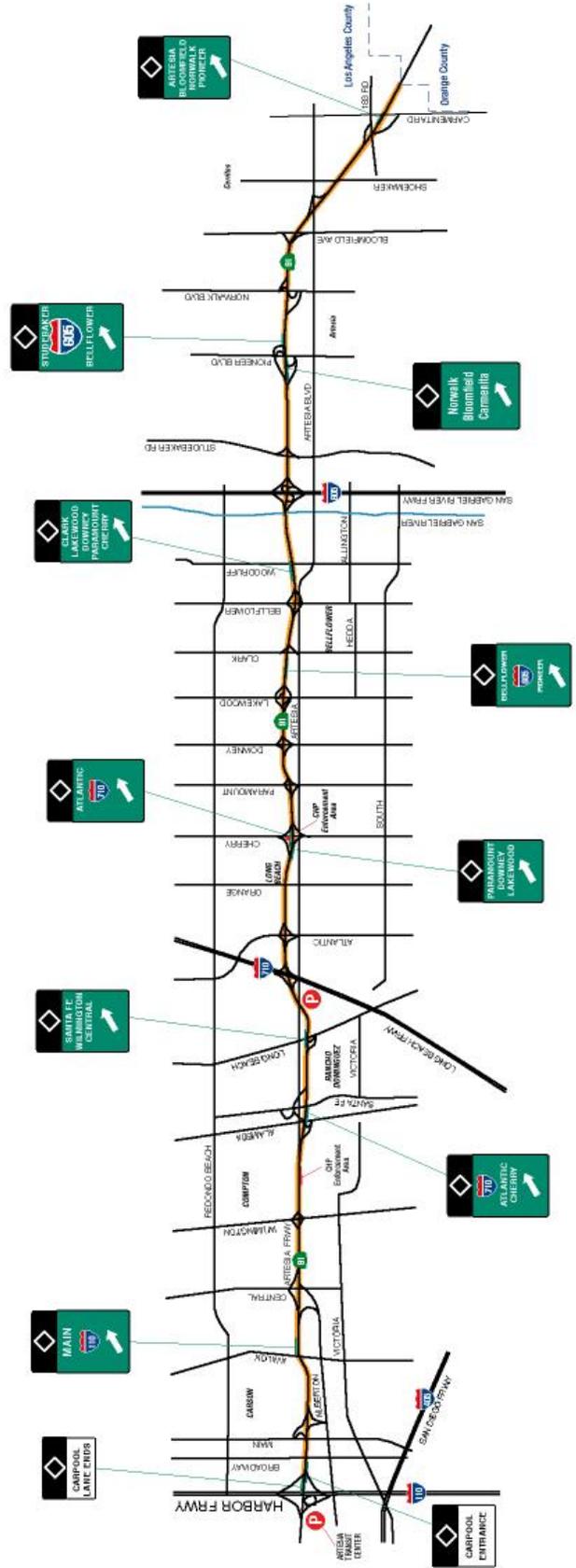
Unique Features:

Eastbound 91 was originally a demonstration project of part time use of the median shoulder, no reconstruction or even resurfacing was done in 1985; just patches to bridge the approach slabs and placement of signs and markings.



ARTESIA FREEWAY HOV LANE Route 110 to Orange County Line

CARPPOOLS ONLY
2 OR MORE PERSONS
PER VEHICLE



Park & Ride

**CARPPOOL VIOLATION
\$271
MINIMUM FINE**

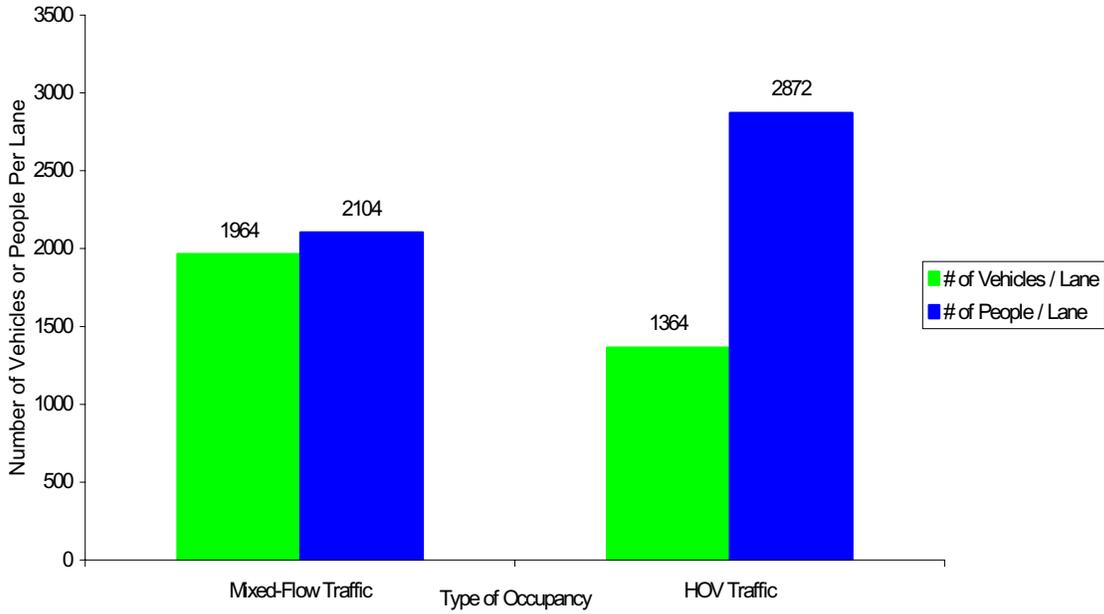


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Rideshare Information (800) COMMUTE • Bike Lockers (213) 897-0235

District 7 Graphic Services - 9/11/10/vegas/eng - 4/17/02

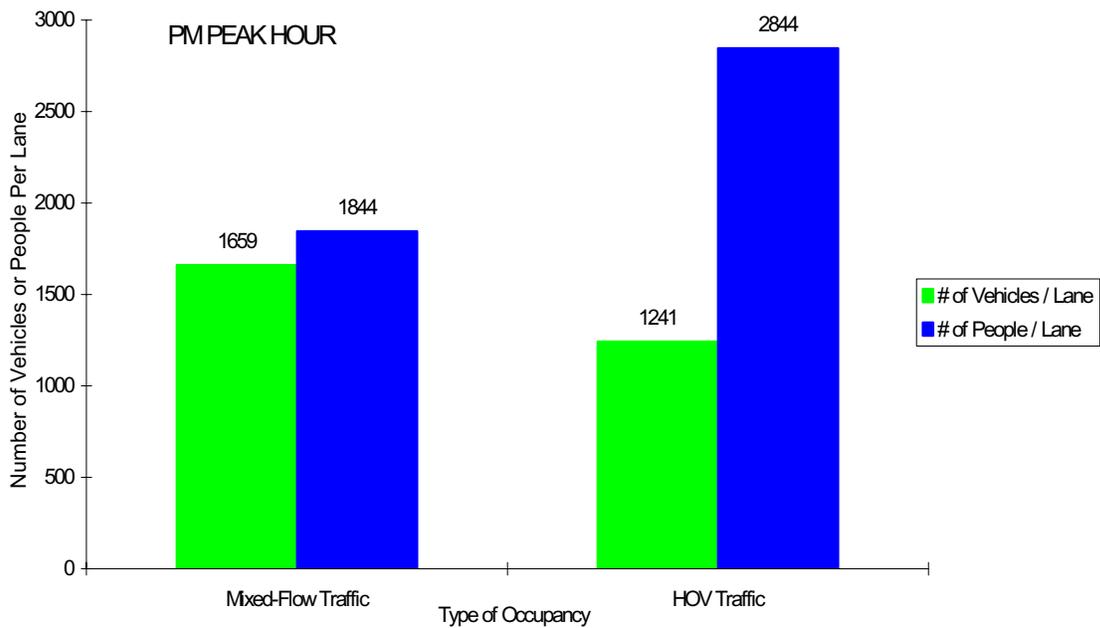
PEAK HOUR COMPARISON

AM PEAK HOUR



Location: LA-91-W/B @Wilmington
Date/Time: 06-20-02 / 7:00-8:00 AM

PM PEAK HOUR



Location: LA-91-E/B @Wilmington
Date/Time: 06-27-02 / 4:30-5:30 PM



FACT SHEET

ROUTE 105 GLENN ANDERSON/ CENTURY FREEWAY

Project Limits & Length:	FROM ROUTE 405 TO ROUTE 605; 16.0 MILES
Date of Opening:	OCTOBER 14, 1993
Cost:	\$ 230.0 MILLIION
Current Peak Hr Volume:	1599 VEHICLES @ LONG BEACH BLVD
Park & Ride Facilities:	14 (AVIATION, HAWTHORNE (2), CRENSHAW/120 th , VERMONT (2), FIGUEROA, AVALON, WILMINGTON, IMPERIAL, LONG BEACH (2), LAKEWOOD, and HOXIE)
Number of Ingress/Egress:	6 WEST BOUND & 7 EAST BOUND

Unique Features:

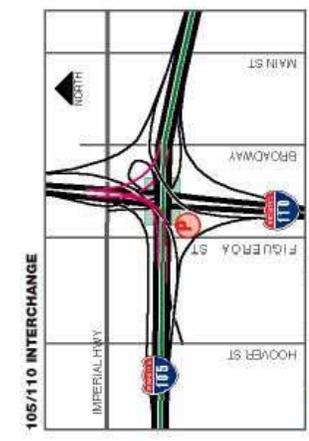
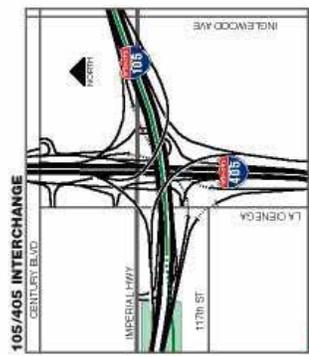
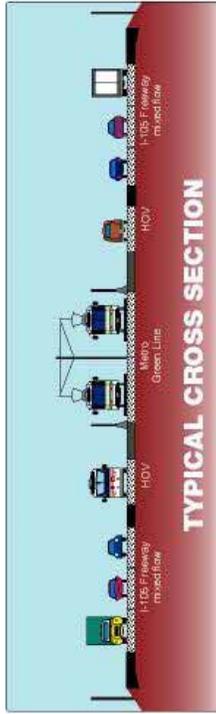
The 105 freeway has a 10-ft left shoulder for the HOV lanes. The initial freeway construction was stopped for eight years due to environmental concerns. Court consent decree said to provide three mixed flow lanes, one HOV lane and one rail line in each direction.

Housing relocation and assistance program almost equal in value to freeway construction costs. The freeway has direct HOV connectors at Route 110/105 interchange. The Route 105/710 interchange used 6000 cubic yards of concrete, which would fill 18 soccer fields 3 ft deep. It used 6500 tons of steel-rebars which can make about 3500 cars.

The most modern freeway has sensors built into the pavement linked to the Caltrans Traffic Operation Center.



INTERSTATE 105 Glenn Anderson (Century) Freeway Transitway Open - October 14, 1993



HOV Ingress/Egress Locations

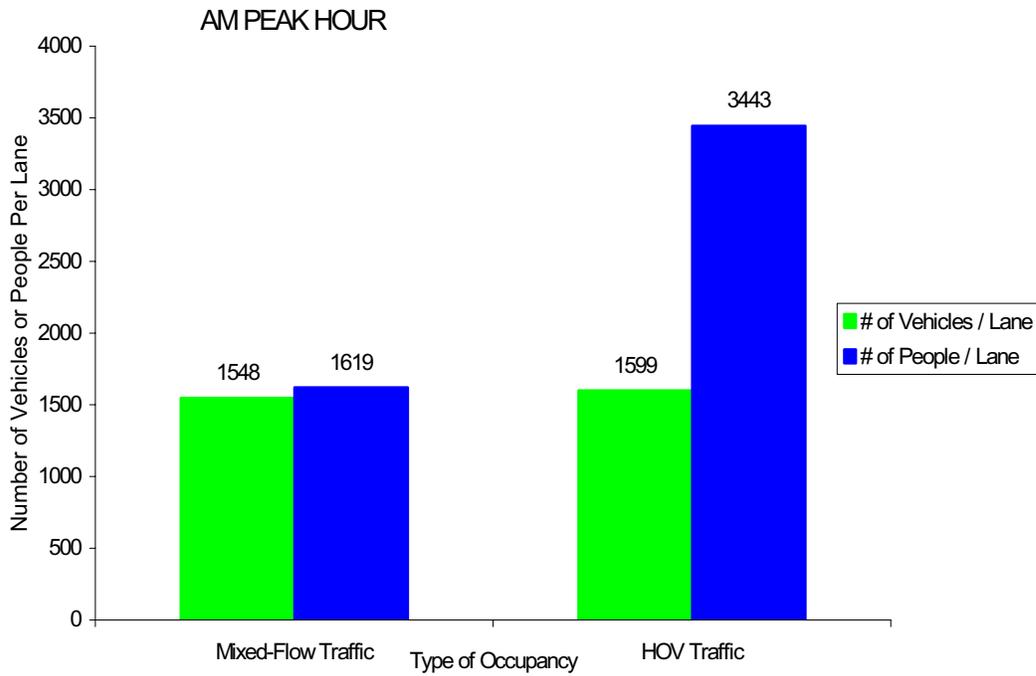


Transit Stations and Park & Ride Lot Locations

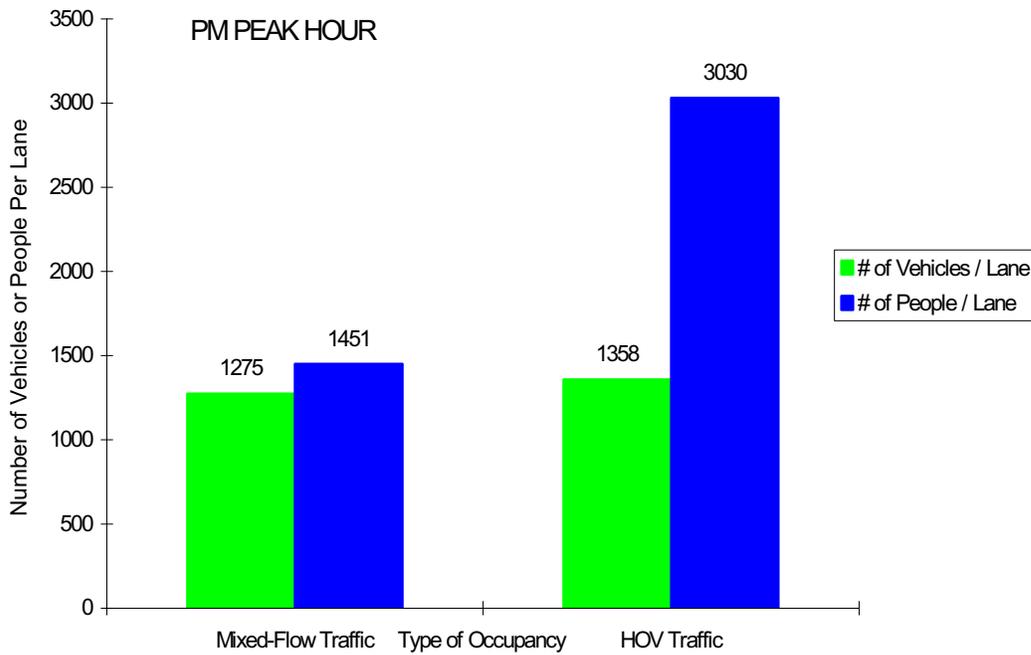


CALIFORNIA DEPARTMENT OF TRANSPORTATION • 105 HOV Map • 1/10/95

PEAK HOUR COMPARISON



Location: LA-105-W/B @ Long Beach Blvd
 Date/Time: 09-19-02 / 7:30-8:30 AM



Location: LA-105-E/B @ Long Beach Blvd
 Date/Time: 09-18-02 / 4:00-5:00 PM



FACT SHEET

ROUTE 110 HARBOR FREEWAY

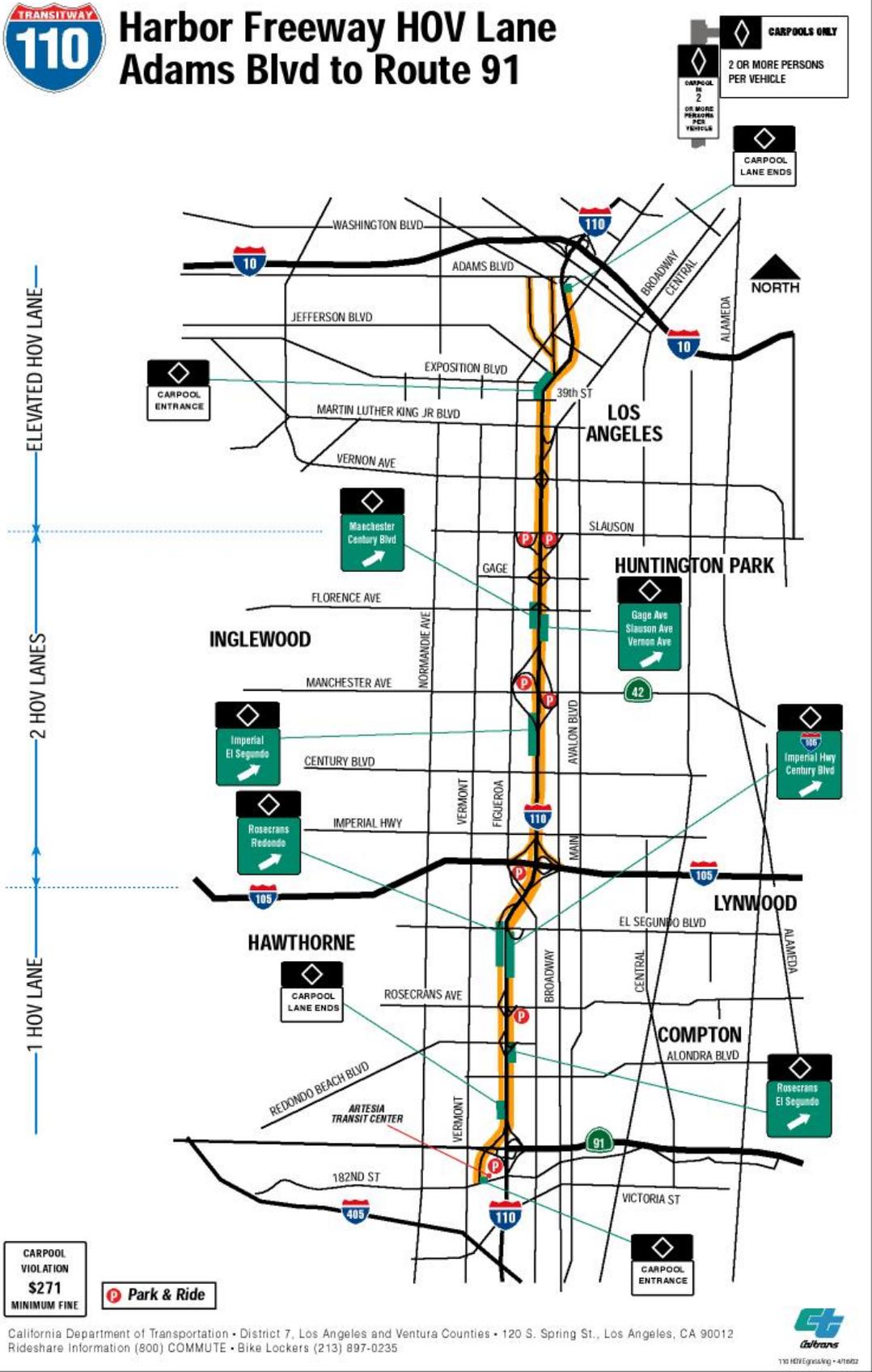
Project Limits & Length:	FROM ADAMS BLVD TO ROUTE 91; 10.7 MILES
Date of Opening:	JUNE 26, 1996
Cost:	\$ 344.0 MILLION
Current Peak Hr Volume:	3202 VEHICLES ON 2 HOV LANES @ SLAUSON AVE
Park & Ride Facilities:	7 (SLAUSON (2), MANCHESTER (2), FIGUEROA, VERMONT/182 nd , and CARSON/FIGUEROA)
Number of Ingress/Egress:	3 IN EACH DIRECTION

Unique Features:

- ◆ 10.3 miles of exclusive transitway with 2.6 miles of elevated structures that are 67-ft wide.
- ◆ North of Route 105, the 110 Transitway has two HOV lanes in each direction.
- ◆ Direct HOV drop ramps at Adams Boulevard and 39th Street.

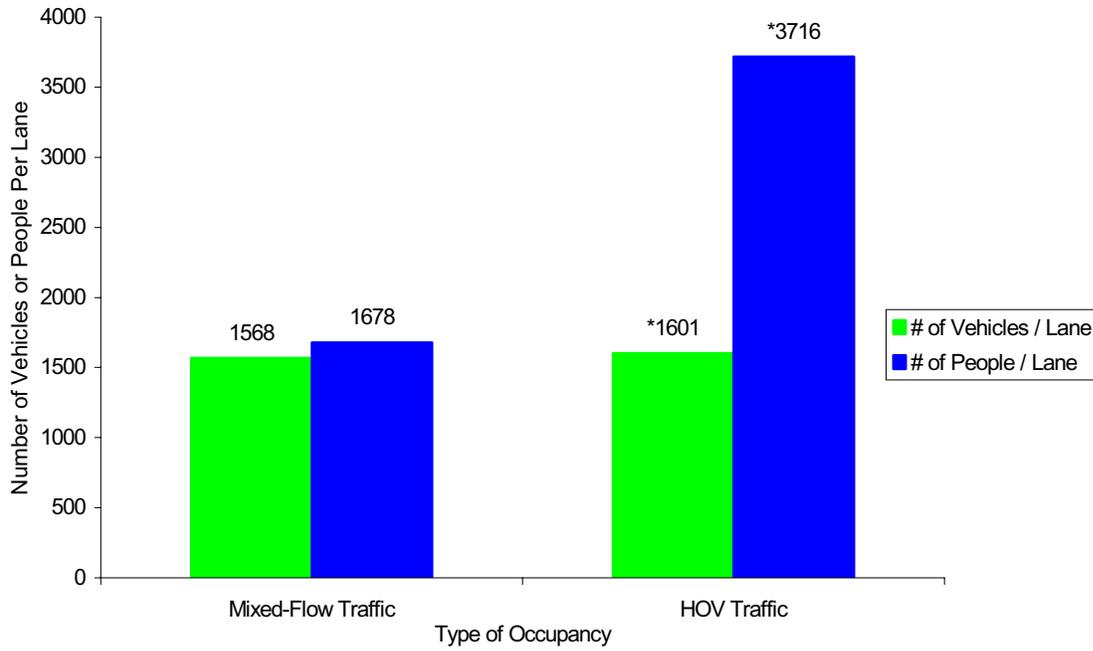


Harbor Freeway HOV Lane Adams Blvd to Route 91



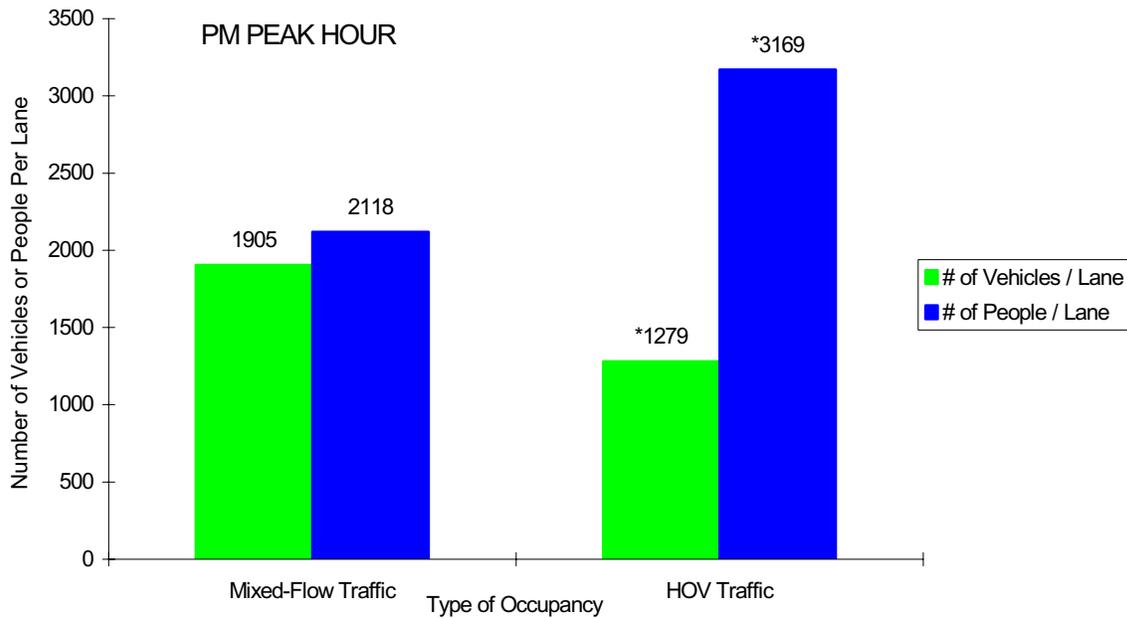
PEAK HOUR COMPARISON

AM PEAK HOUR



Location: LA-110-N/B @ Slauson Ave
 Date/Time: 09-05-02 / 7:15-8:15 AM

PM PEAK HOUR



Location: LA-110-S/B @ Slauson Ave
 Date/Time: 10-08-02 / 4:15-5:15 PM

* Two (2) HOV lanes at this location. Data shown represents volume on one (1) HOV lane



FACT SHEET

ROUTE 118 RONALD REAGAN FREEWAY

Project Limits & Length:	FROM VENTURA CO. LINE TO RTE 5; 11.4 MILES
Date of Opening:	MARCH 7, 1997
Cost:	\$ 22.4 MILLION
Current Peak Hr Volume:	1056 VEHICLES @ RESEDA BLVD
Park & Ride Facilities:	3 (PORTER RANCH and CHATSWORTH (2))
Number of Ingress/Egress:	4 EAST BOUND & 5 WEST BOUND

Unique Features:

The construction of this HOV facility included the addition of another regular freeway lane as well. This facility has been open for 5 years, and the growth and change in traffic patterns has filled the additional regular lane and is accommodating over 1056 vehicles in the HOV lane.

RONALD REAGAN FREEWAY HOV LANE

Ventura County line to Interstate 5



CARPOOLS ONLY

2 OR MORE PERSONS PER VEHICLE

HOV 2+ HOV 3+ HOV 4+ HOV 5+

CARPOOL VIOLATION

\$271

MINIMUM FINE

Park & Ride

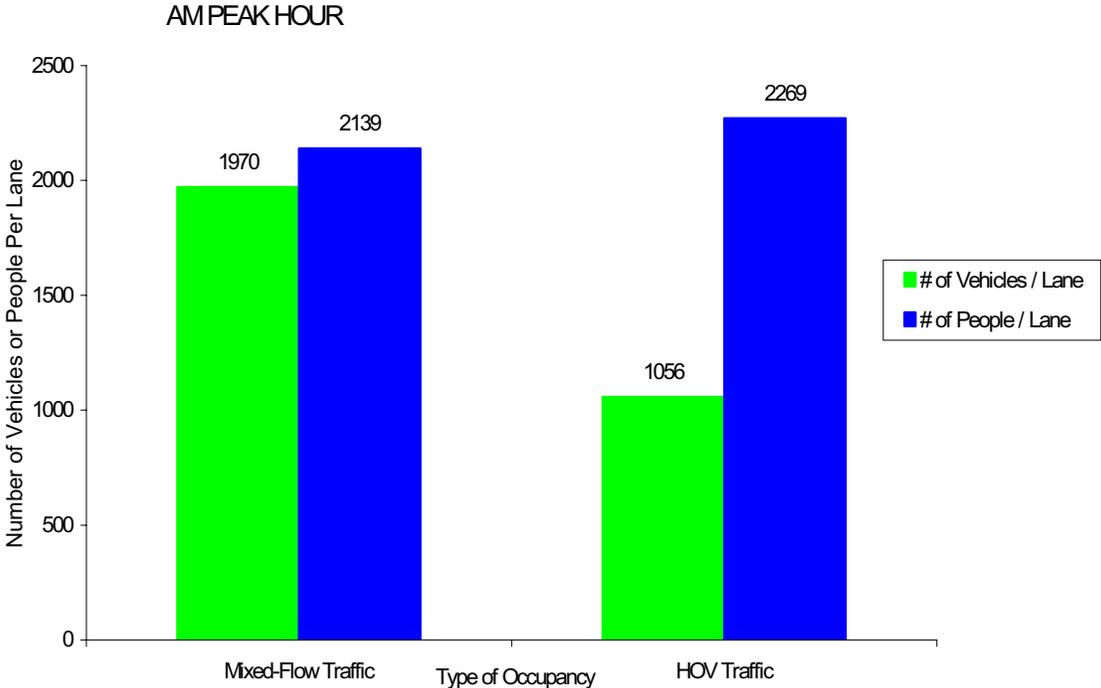
New Ingress / egress

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 Redshare Information (800) COMMUTE • Bike Lockers (213) 897-0235

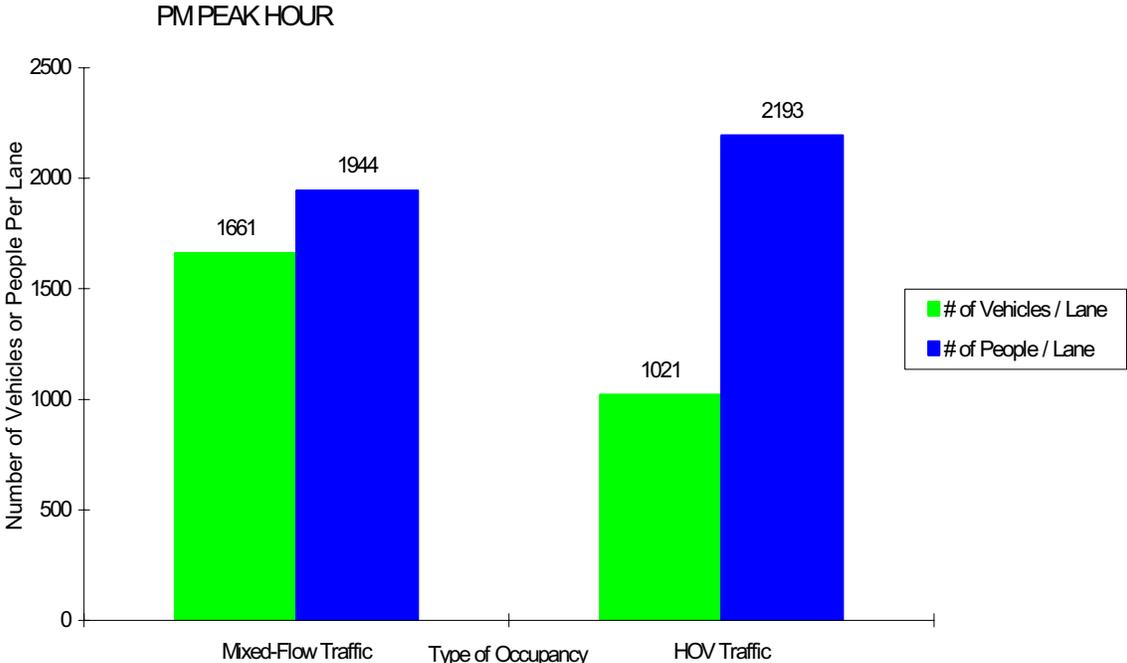


District 7 Graphic Services • 118 HOVlanes .log • 6/16/03

PEAK HOUR COMPARISON



Location: LA-118-W/B @ Reseda Blvd
 Date/Time: 09-11-02 / 7:00-8:00 AM



Location: LA-118-E/B @ Reseda Blvd
 Date/Time: 09-04-02 / 4:30-5:30 PM



FACT SHEET

ROUTE 134 VENTURA FREEWAY

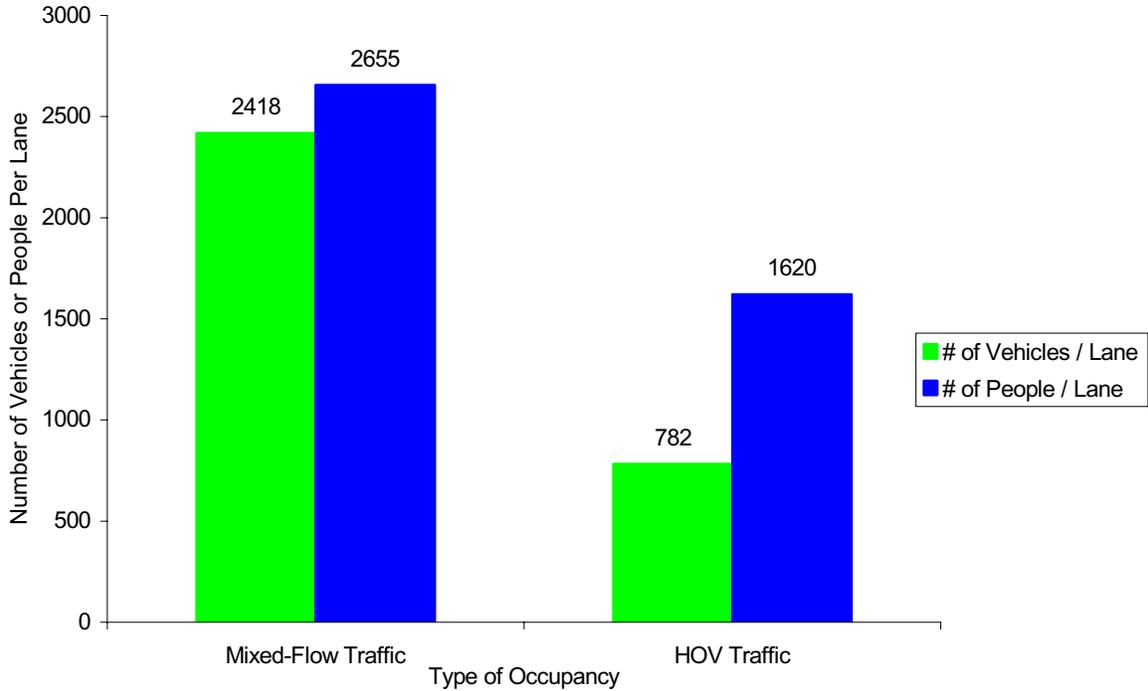
Project Limits & Length:	FROM ROUTE 101/170 TO ROUTE 5	5.1 MILES
	FROM ROUTE 5 TO ROUTE 2	4.2 MILES
	FROM ROUTE 2 TO ROUTE 210	3.6 MILES
Date of Opening:	ROUTE 101/170 TO ROUTE 5	OCTOBER 2, 1995
	ROUTE 5 TO ROUTE 2	MARCH 12, 1996
	ROUTE 2 TO ROUTE 210	AUGUST 30, 1996
Cost:	ROUTE 101/170 TO ROUTE 5	\$ 7.1 MILLION
	ROUTE 5 TO ROUTE 2	\$ 5.7 MILLION
	ROUTE 2 TO ROUTE 210	\$ 9.0 MILLION
Current Peak Hr Volume:	833 VEHICLES @ JACKSON ST	
Park & Ride Facilities:	2 (HARVEY and VENTURA)	
Number of Ingress/Egress:	ROUTE 101/170 TO ROUTE 5	2 IN EACH DIRECTION
	ROUTE 5 TO ROUTE 2	2 IN EACH DIRECTION
	ROUTE 2 TO ROUTE 210	2 IN EACH DIRECTION

Unique Features:

HOV discontinuity at Route 5 due to connectors of Route 5 to Route 134; HOV lane would have ended up in the #3 lane of the 134 freeway. Therefore, it ends and starts again in the median after 0.8 miles.

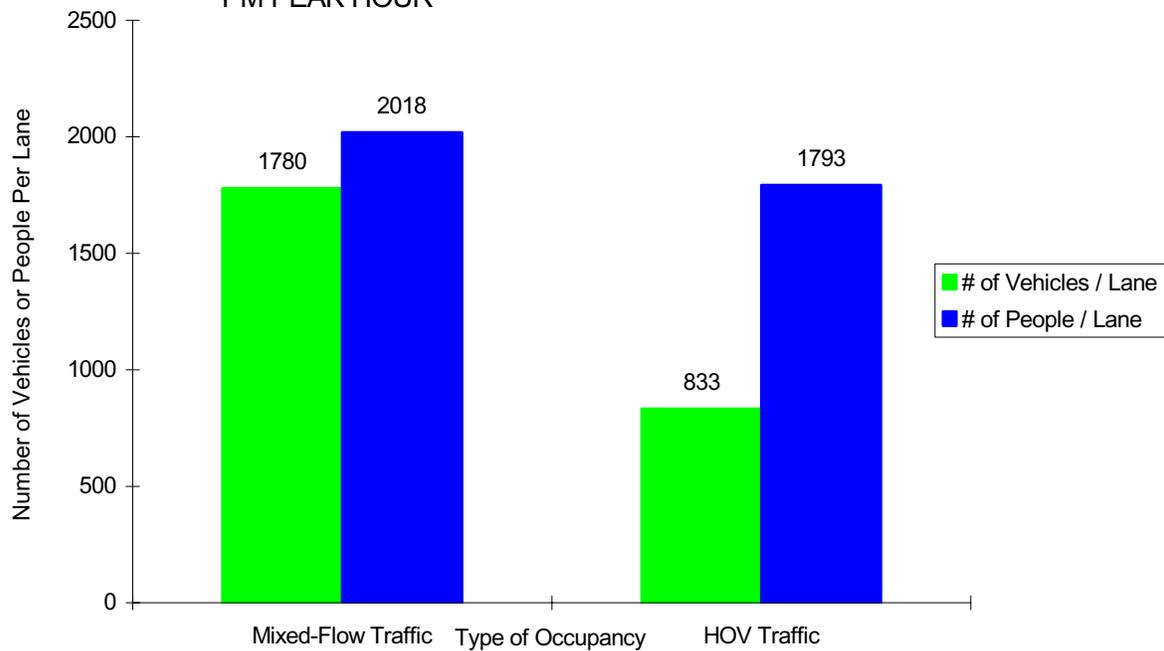
PEAK HOUR COMPARISON

AM PEAK HOUR



Location: LA-134-W/B @ Jackson St.
 Date/Time: 09-26-02 / 7:30-8:30 AM

PM PEAK HOUR



Location: LA-134-E/B @ Jackson St.
 Date/Time: 11-14-02 / 4:15-5:15 PM



FACT SHEET

ROUTE 170 HOLLYWOOD FREEWAY EXTENSION

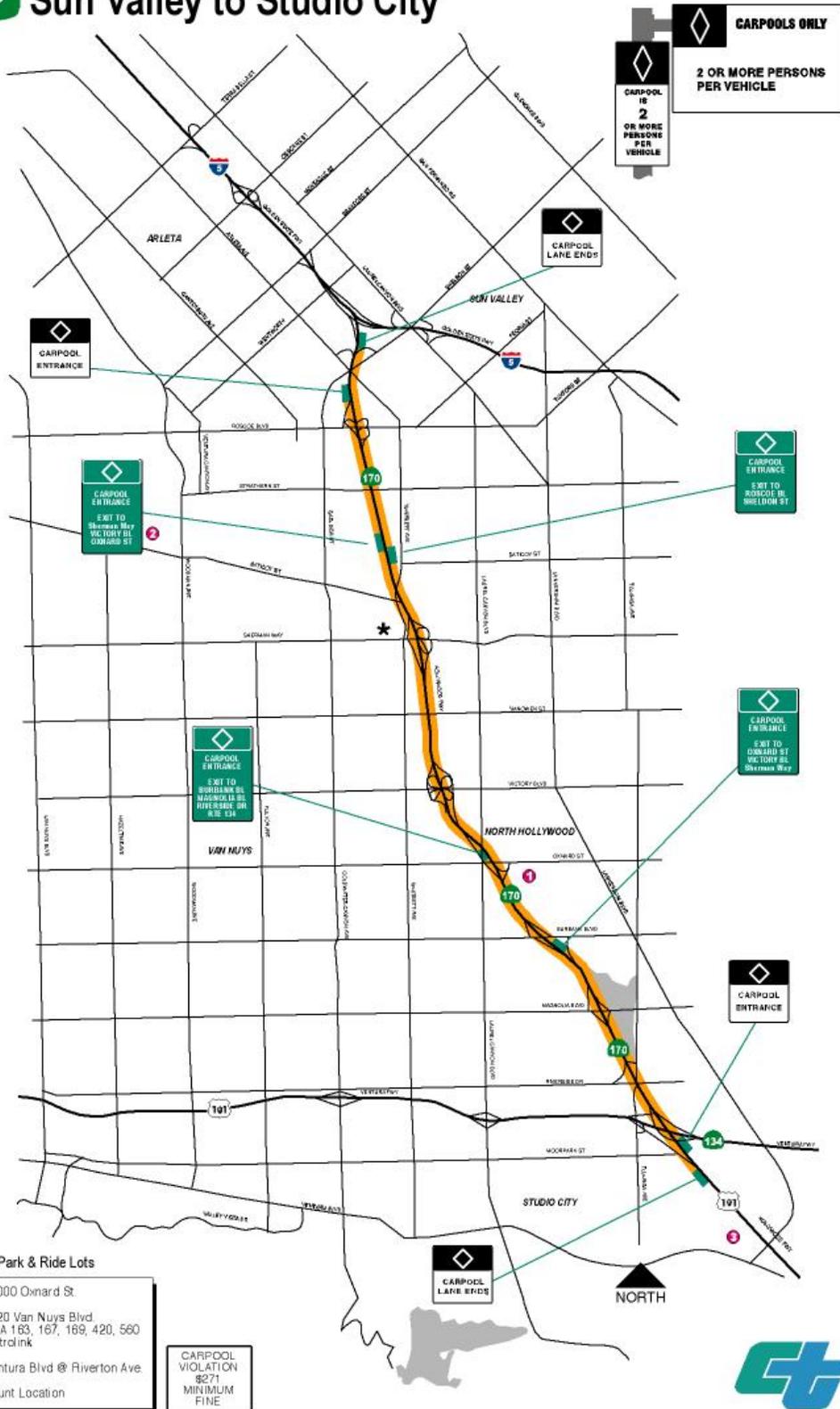
Project Limits & Length: FROM ROUTE 101/134 TO ROUTE 5; 6.1 MILES
Date of Opening: FEBUARY 11, 1996
Cost: \$ 7.9 MILLION
Current Peak Hr Volume: 774 VEHICLES @ SHERMAN WAY
Park & Ride Facilities: 2 (OXNARD and VENTURA)
Number of Ingress/Egress: 2 IN EACH DIRECTION

Unique Features:

Fast track HOV project.

170

HOLLYWOOD FREEWAY CARPOOL LANE Sun Valley to Studio City



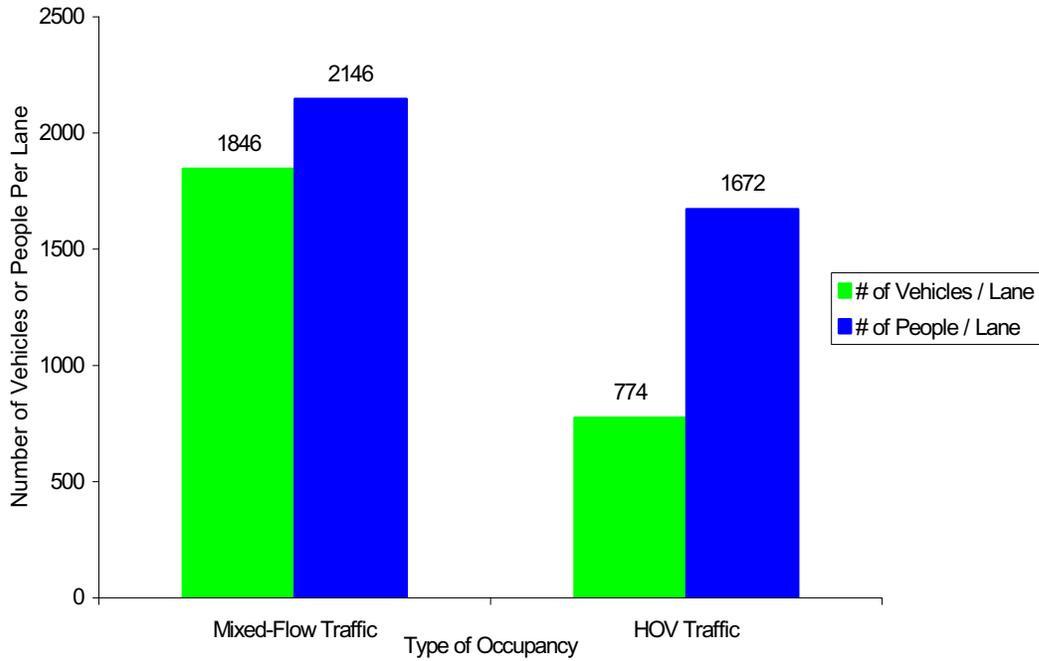
California Department of Transportation * District 7, Los Angeles and Ventura Counties * 120 S. Spring St., Los Angeles, CA 90012
Rideshare Information (800) COMMUTE * Bike Lockers (213) 867-0236



District 7 Graphic Services -170 Ingress: 4/10 6/11/02

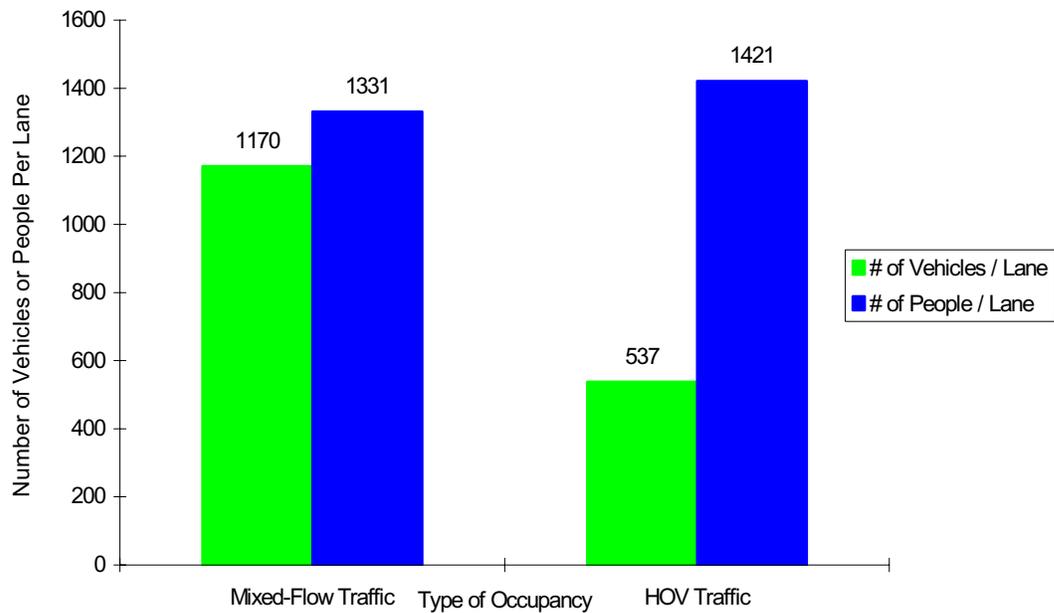
PEAK HOUR COMPARISON

AM PEAK HOUR



Location: LA-170-S/B @ Sherman Way
 Date/Time: 02-26-02 / 7:00-8:00 AM

PM PEAK HOUR



Location: LA-170-N/B @ Sherman Way
 Date/Time: 01-24-02 / 4:15-5:15 PM



FACT SHEET

ROUTE 210 FOOTHILL FREEWAY

PROJECT LIMITS & LENGTH:	FROM ROUTE 134 TO SUNFLOWER AVE	18.5 MILES
	FROM SUNFLOWER AVE TO FOOTHILL BLVD	2.3 MILES
	FROM FOOTHILL BLVD TO SBD COUNTY LINE	6.0 MILES
Date of Opening:	FROM ROUTE 134 TO SUNFLOWER AVE	DEC 16, 1993
	FROM SUNFLOWER AVE TO FOOTHILL BLVD	SEP 08, 1997
	FROM FOOTHILL BLVD TO SBD COUNTY LINE	NOV 24, 2002
Cost:	FROM ROUTE 134 TO SUNFLOWER AVE	\$13.2 MILLION
	FROM SUNFLOWER AVE TO FOOTHILL BLVD	\$10.0 MILLION
	FROM FOOTHILL BLVD TO SBD COUNTY LINE	\$264 MILLION
Current Peak Hr Volume:	1590 VEHICLES @ SECOND ST	
Park & Ride Facilities:	5 (SAN GABRIEL/SIERRA MADRE, FOOTHILL/SANTA ANITA, MYRTLE, BASELINE RD, AND LONE HILL)	
Number of Ingress/Egress:	14 IN EACH DIRECTION	

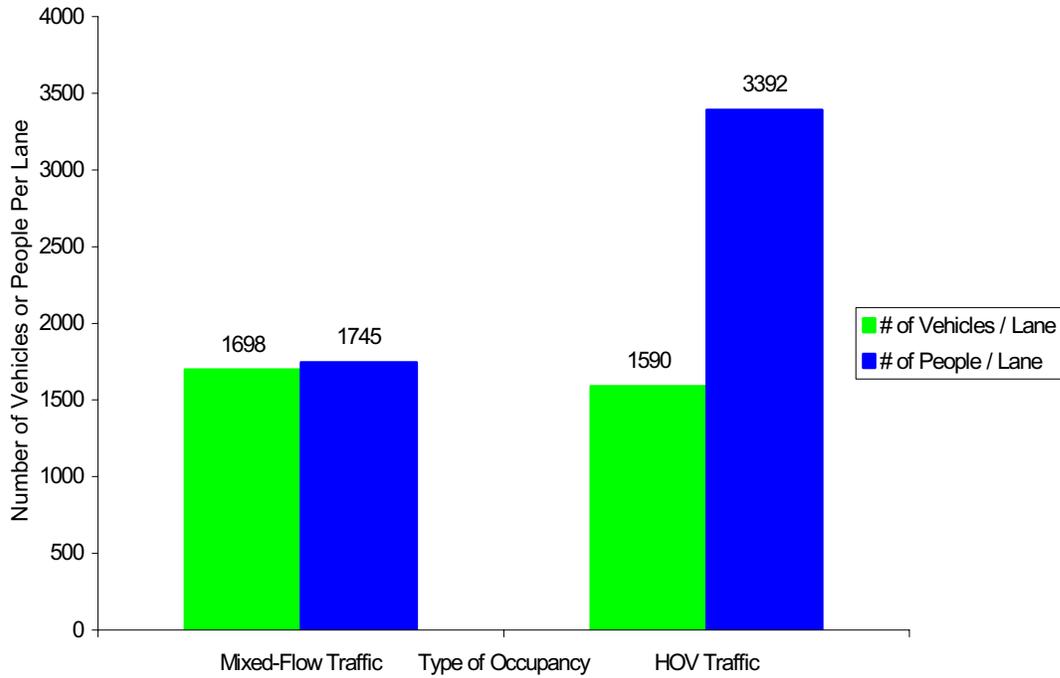
Unique Features:

The 210 Freeway was built within the last two decades. The HOV project was built in 1994. Construction of HOV started as use of the existing median shoulder, but project required removal of shoulder and construction of structural section in the median. Several design features were tested as to start and end of the HOV's, and a direct drop ramp from a city street in Pasadena. The HOV drop ramp at Fair Oaks Avenue was opened on May 30, 1996.

Completion and opening of 14 miles of the new Foothill Freeway (SR-210) between Foothill Boulevard (County of Los Angeles) and Day Creek Boulevard (County of San Bernardino) to connect with six-mile section of the freeway that opened in August 2001 from Day Creek Boulevard to Sierra Avenue. The new freeway segment provides additional freeway capacity and an alternate east/west route for commuters. The project constructed eight lanes of freeway (three mixed-flow lanes and one High Occupancy Vehicle (HOV) lane in each direction) with space for future widening in the median. This new freeway segment connects with I-15, the direct route to Las Vegas.

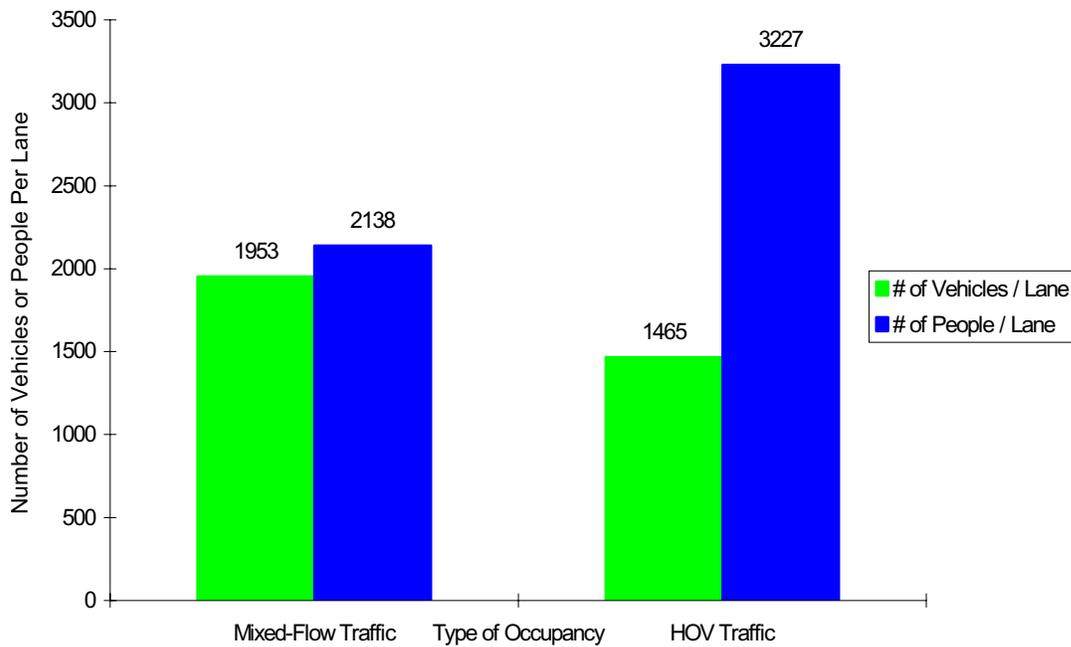
PEAK HOUR COMPARISON

AM PEAK HOUR



Location: LA-210-W/B @ 2nd St.
 Date/Time: 09-24-02 / 6:45-7:45 AM

PM PEAK HOUR



Location: LA-210-E/B @ 2nd St.
 Date/Time: 10-01-02 / 4:30-5:30 PM



FACT SHEET

ROUTE 405 SAN DIEGO FREEWAY

Project Limits & Length:	FROM BELLFLOWER BLVD TO ROUTE 605	2.2 MILES
	FROM ROUTE 110 TO 120 TH STREET	7.7 MILES
	FROM 120 TH STREET TO CENTURY BLVD	2.0 MILES
	FROM ROUTE 101 TO ROUTE 5	10.1 MILES
	FROM ORA CO LINE TO ROUTE 710	7.6 MILES
	FROM ROUTE 710 TO ROUTE 110	6.1 MILES
	FROM WATERFORD TO RTE 101 S/B ONLY	7.8 MILES
Date of Opening:	FROM BELLFLOWER BLVD TO ROUTE 605	OCT 02, 1993
	FROM ROUTE 110 TO 120 TH STREET	APR 08, 1993
	FROM 120 TH STREET TO CENTURY BLVD	JAN 1994
	FROM ROUTE 101 TO ROUTE 5	OCT 22, 1996
	FROM ORA CO LINE TO ROUTE 710	FEB 12, 1998
	FROM ROUTE 710 TO ROUTE 110	OCT 08, 1998
	FROM WATERFORD TO RTE 101 S/B ONLY	JAN 08, 2002
Cost:	FROM BELLFLOWER BLVD TO ROUTE 605	\$ 4.5 MILLION
	FROM ROUTE 110 TO 120 TH STREET	\$ 8.3 MILLION
	FROM ROUTE 101 TO ROUTE 5	\$15.1 MILLION
	FROM ORA CO LINE TO ROUTE 710	\$24.8 MILLION
	FROM ROUTE 710 TO ROUTE 110	\$24.2 MILLION
	FROM WATERFORD TO RTE 101 S/B ONLY	\$15.6 MILLION
Current Peak Hr Volume:	1532 VEHICLES @ TEMPLE AVE	
Park & Ride Facilities:	12 (CHATSWORTH (2), SKIRBALL CENTER, NATIONAL, AVIATION, EL SEGUNDO, MARINE, KINGSDALE, VERMONT/182 nd , WARDLOW, LONG BEACH, and BELLFLOWER)	
Number of Ingress/Egress:	FROM ROUTE 105 TO ROUTE 110	4 IN EACH DIRECTION
	FROM ROUTE 5 TO ROUTE 101	3 N/B, 4 S/B
	FROM ORA CO LINE TO RT 710	4 IN EACH DIRECTION
	FROM ROUTE 710 TO ROUTE 110	2 IN EACH DIRECTION
	FROM ROUTE 101 TO WATERFORD	4 S/B ONLY

Unique Features:

The HOV facility between 120th Street to Route 110 was opened initially with one ingress/egress location. Two more ingress/egress were approved and constructed in each direction later.

The HOV extension from Route 105 to 120th Street was accomplished by a signing and striping CCO to the Route 105 construction project.

SAN DIEGO FREEWAY HOV LANE

Interstate 105 to Orange County Line



CARPPOOLS ONLY

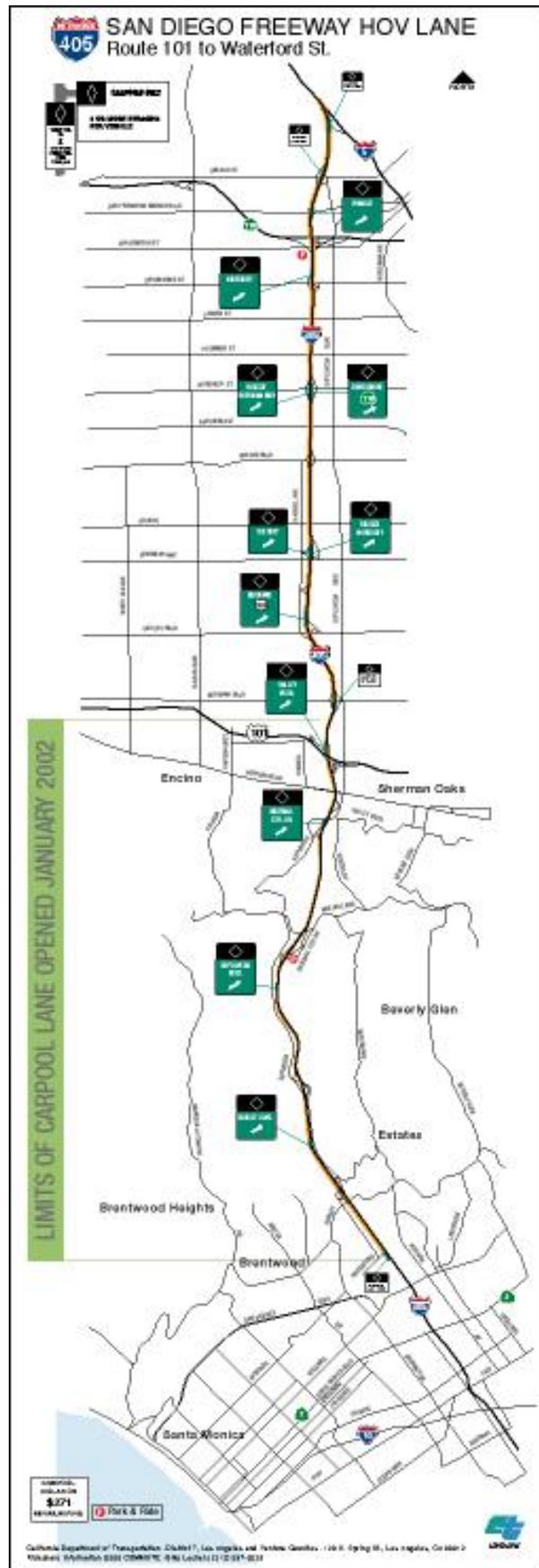
2 OR MORE PERSONS PER VEHICLE

CARPPOOLING
2 OR MORE PERSONS PER VEHICLE



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405 HOV LANE CHANGE + 4/1/05





SAN DIEGO FREEWAY HOV LANE

Route 101 to Interstate 5

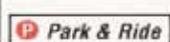
CARPools ONLY

2 OR MORE PERSONS PER VEHICLE

CARPPOOL IS 2 OR MORE PERSONS PER VEHICLE



CARPPOOL VIOLATION
\$271
MINIMUM FINE



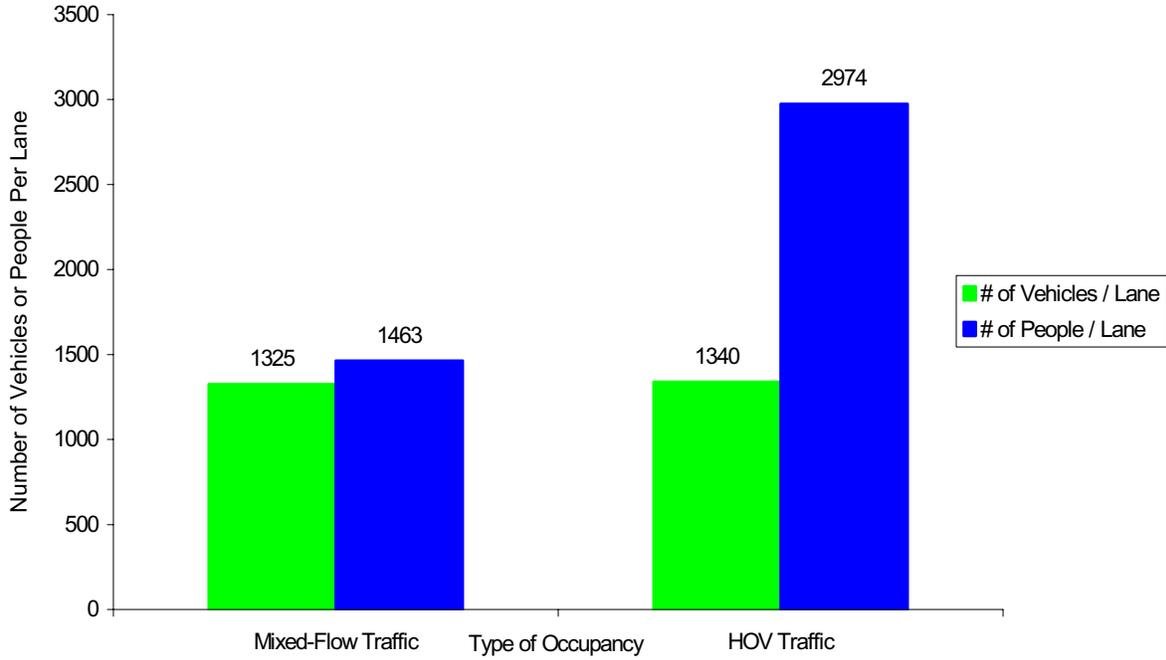
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 Rideshare Information (800) COMMUTE • Bike Lockers (213) 897-0235



District 7 Graphic Services • 405 I-405 Vignetting 101-6 1/05/02

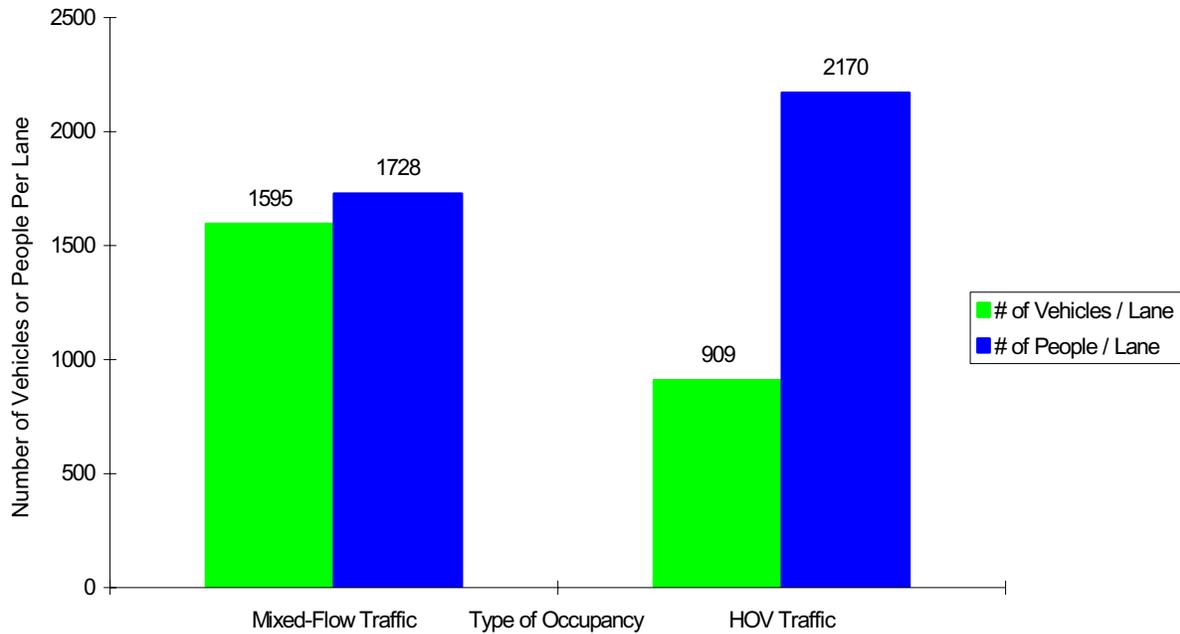
PEAK HOUR COMPARISON

AM PEAK HOUR



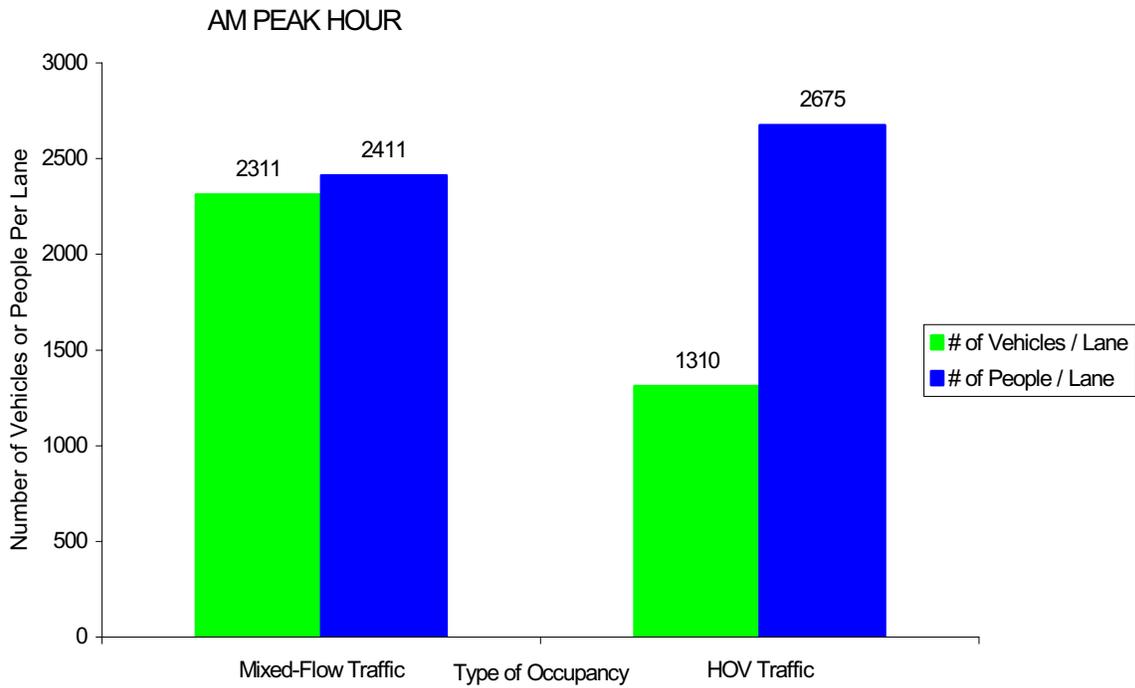
Location: LA-405-S/B @ Burbank Blvd
 Date/Time: 10-17-02 / 6:30-7:30 AM

PM PEAK HOUR

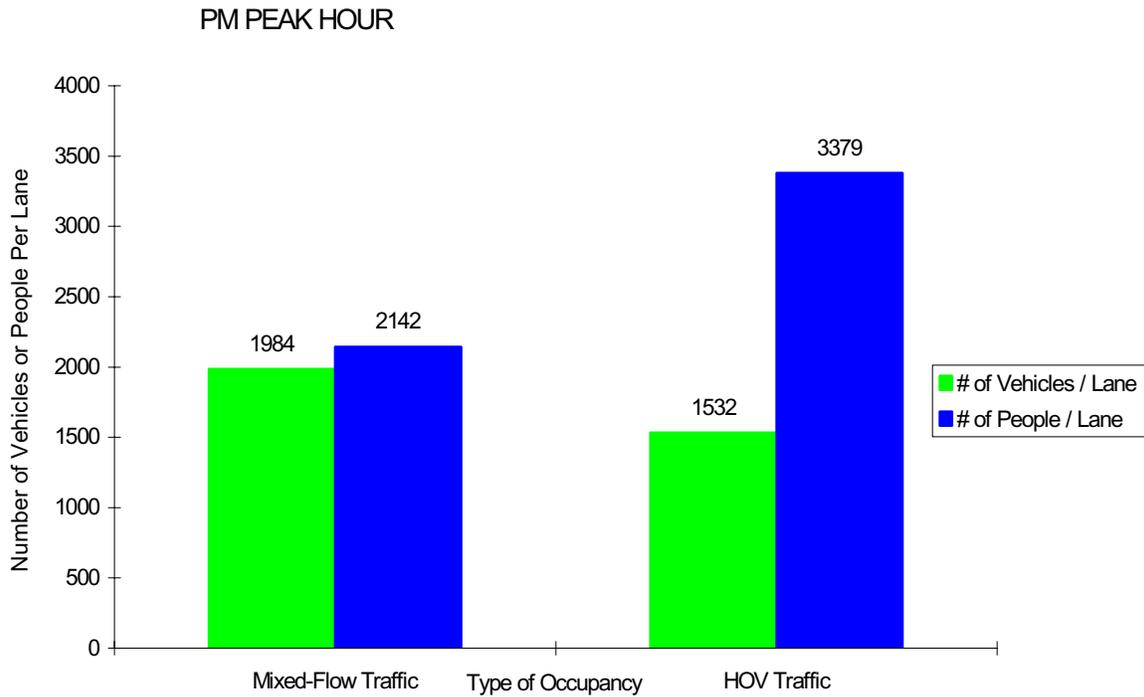


Location: LA-405-N/B @ Burbank Blvd
 Date/Time: 09-24-02 / 4:00-5:00 PM

PEAK HOUR COMPARISON



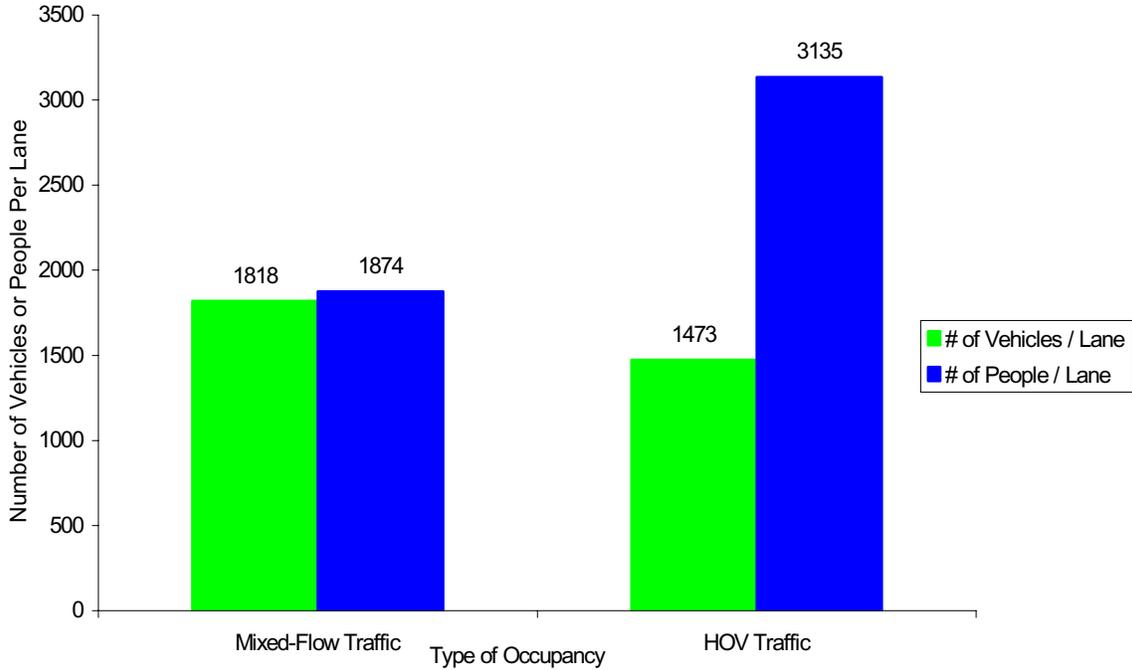
Location: LA-405-N/B @ Temple Ave.
 Date/Time: 06-13-02 / 7:30-8:30 AM



Location: LA-405-S/B @ Temple Ave.
 Date/Time: 10-29-02 / 4:00-5:00 PM

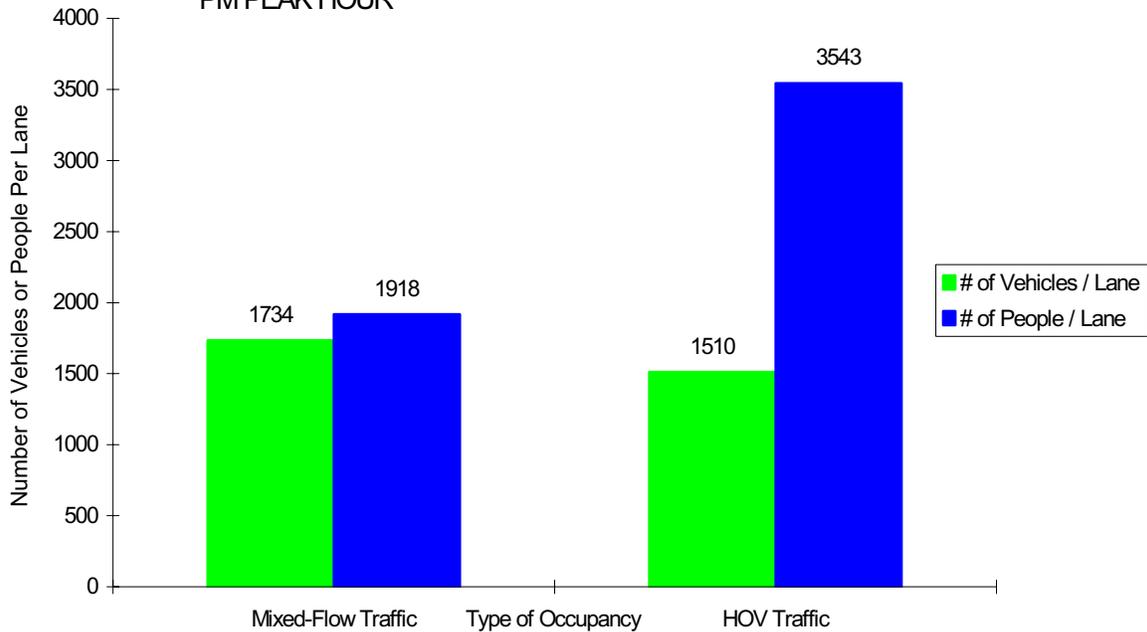
PEAK HOUR COMPARISON

AM PEAK HOUR



Location: LA-405-N/B @ Normandie
 Date/Time: 11-14-02 / 7:00-8:00 AM

PM PEAK HOUR



Location: LA-405-S/B @ Normandie
 Date/Time: 10-24-02 / 4:00-5:00 PM



FACT SHEET

ROUTE 605 SAN GABRIEL RIVER FREEWAY

Project Limits & Length:	FROM SOUTH ST. TO TELEGRAPH RD FROM TELEGRAPH RD TO ROUTE 10 FROM ORA. CO. LINE TO SOUTH ST.	7.0 MILES 9.9 MILES 3.8 MILES
Date of Opening:	FROM SOUTH ST. TO TELEGRAPH RD FROM TELEGRAPH RD TO ROUTE 10 FROM ORA. CO. LINE TO SOUTH ST.	APR 2, 1997 APR 3, 1998 MARCH 2001
Cost:	FROM SOUTH ST. TO TELEGRAPH RD FROM TELEGRAPH RD TO ROUTE 10 FROM ORA. CO. LINE TO SOUTH ST.	\$10.8 MILLION \$23 MILLION \$14.6 MILLION
Current Peak Hr Volume:	1528 VEHICLES @ BEVERLY BLVD	
Park & Ride Facilities:	2 (HOXIE and DURFEE)	
Number of Ingress/Egress:	FROM ORA. CO. LINE TO TELEGRAPH RD FROM TELEGRAPH RD TO ROUTE 10	4 S/B, 4 N/B 6 S/B, 5 N/B
Unique Features:		

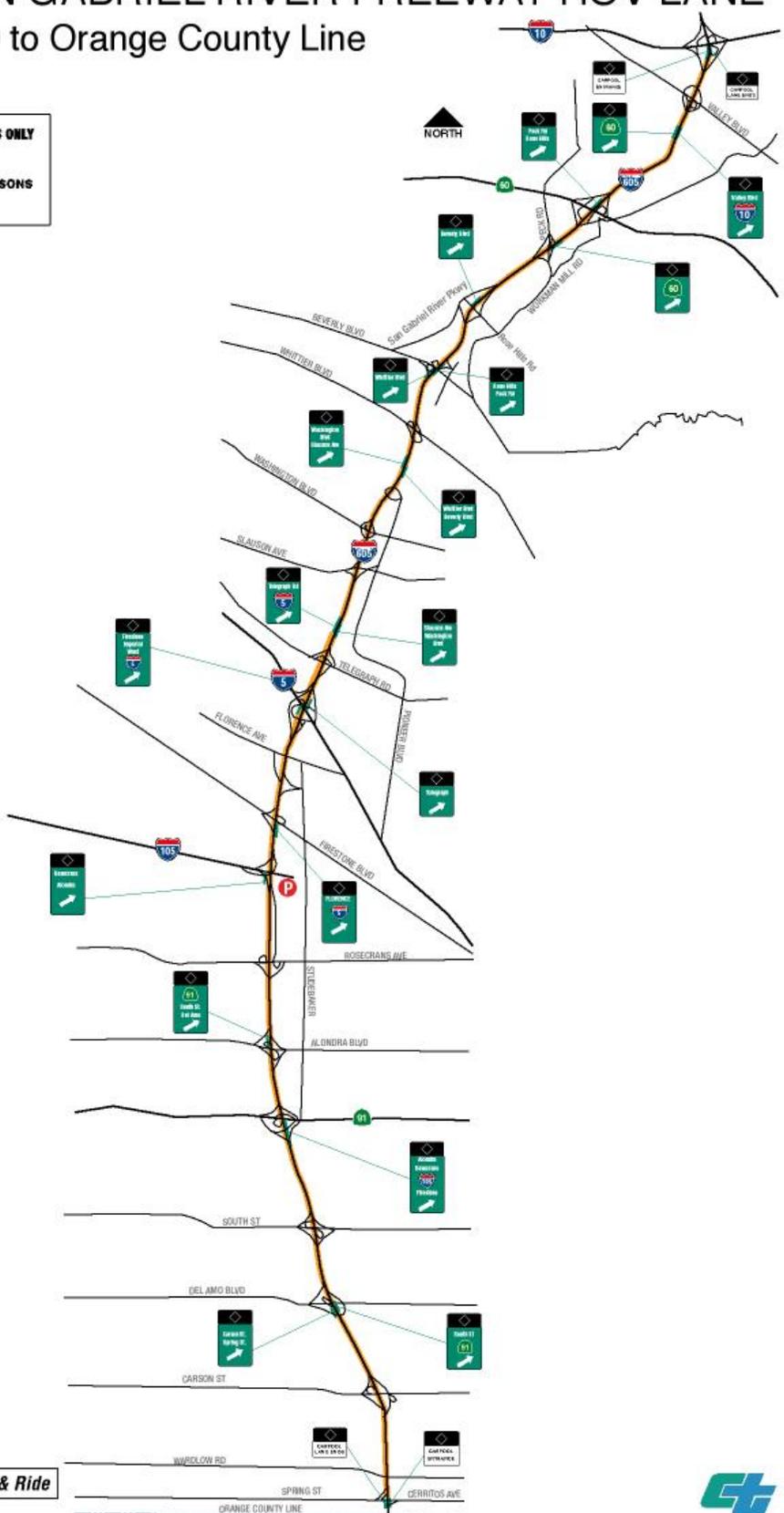


SAN GABRIEL RIVER FREEWAY HOV LANE I-10 to Orange County Line

CARPools ONLY

2 OR MORE PERSONS PER VEHICLE

CARPPOOL ID 2 OR MORE PERSONS PER VEHICLE



CARPPOOL VIOLATION
\$271
MINIMUM FINE

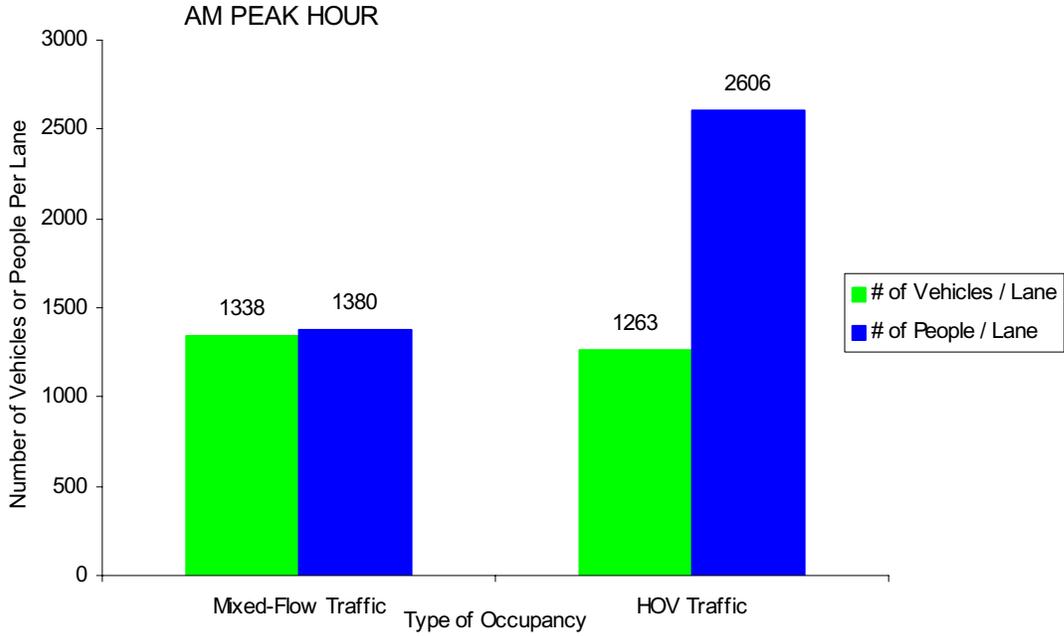


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Rideshare Information (800) COMMUTE • Bike Lockers (213) 897-0235

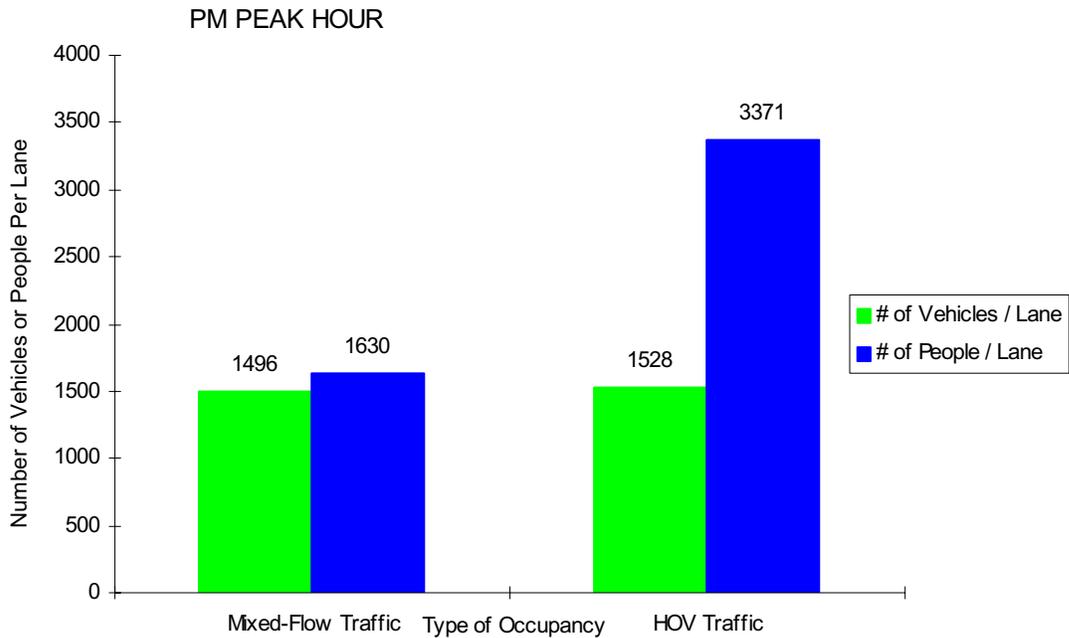


District 7 Graphic Services • 605 HOV/egreening update • 4/20/02

PEAK HOUR COMPARISON



Location: LA-605-S/B @ Beverly Blvd.
 Date/Time: 07-30-02 / 6:30-8:30 AM



Location: LA-605-N/B @ Beverly Blvd.
 Date/Time: 09-05-02 / 4:30-5:30 PM